	REQUII ata Item)	REMENTS L	IST	Form Appro		8				
Public reporting burden for this colle including the time for reviewing instr data needed, and completing and review estimate or any other aspect of this c to Department of Defense, Washington H 1215 Jefferson Davis Highway, Suite 12 Paperwork Reduction Project (0704-0188 addresses. Send completed form to the	uctions, so ing the co- ollection of eadquarters 04, Arlingt ), Washingt	earching existing of llection of informa- of information, in- s Services, Director, ton, VA 22202-4302 ton DC 20503. Ples	data source ation. Send cluding sug orate for I , and to th	s, gathering and mai comments regarding gestions for reducir nformation Operation e Office of Manageme	intaining this by this and I ent and I ent and	ng tl urden burd Repon	n den rts,   get,			
A. CONTRACT LINE ITEM NO.   B. EXHIB	IT	C: CATEGORY: TES	STING AND I	NSPECTION OTHER						
D. SYSTEM/ITEM   E PISTON LANDING GEAR	FD2020-03		F. CONTRAC	TOR						
1. DATA ITEM NO. 2. TITLE OF DATA ITEM A001 TEST/INSPECTION RE			3. SUBTITL	E ENT TESTING				17.	PRICE GROU	
4. AUTHORITY (Data Acquisition Document DI-NDTI-80809B/T		ONTRACT REFERENCE	GOVERN	  6. REQUIRING OFFICE   OO-ALC/MADLV	2			18.	ESTIMATED	
i	REQUENCY 1	12. DATE OF FIRST S BLK 16	SUBMISSION	  14. DISTRIBU	TION					
	S OF DATE 1	L3. DATE OF SUBSEQU	JENT SUBM.	a. ADDRESSEE		COPI —fir  reg	nal—			
16. REMARKS			· · · · · · · · · · · · · · · · · · ·	  OO-ALC/MADLV		1				
(4) Contractor format acceptable. Par clarified as follows:				7278 4TH STREET						
All dimensions and tolerances spec be listed in one column with the actual inspection of the part, listed in anoth	l correspor her column.	nding reading obtai	ined from	BLDG 100, BAY D 		    	 			
identified and certified along with a conforming to applicable data requirem	Materials utilized in the manufacture of "First Article" item shall be entified and certified along with a copy of material purchase requests as informing to applicable data requirements.									
Material processes including finisment welding inspections, anodize, pair ture of the first article will be identicated.	nting, etc. tified and	<ul> <li>utilized in the certified as confo</li> </ul>	manufac-		 <del>  </del>					
the applicable requirements. A copy of processes accomplished at other than confidence of their requirements as called out	f the purch ontractor f	nase order certifyi Facility shall be i	ing the							
(AFLC Form 3720).  (9) DISTRIBUTION STATEMENT D: Distribution Defense and DOD contractors only (Crit.	bution auth	norized to the Depa	artment of				    			
requests for this document shall be re-	ferred to 0	OO-ALC/LGHS.	Other							
(12) Submit concurrently with First A	rticle.			 	 <del>  </del>	 	   			
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G. PREPARED BY Ray Brown LGOO Data Mgr.	H. DATE	I. APPROVEI JNE 03   Bryan Sn	BY Buy	n C A A B	J. DAT	TE JUNE	     03			
D Form 1423-1, JUN 90	Previous	editions are obsol	ete	Page	lof.		· Bagos			

#### INSTRUCTIONS FOR COMPLETING DD FORM 1423

(See DoD 5010.12M for detailed instructions )

#### FOR GOVERNMENT PERSONNEL

- Item A. Self-explainatory.
- Item B. Self-explainatory.
- Item C. Mark (X) appropriate category: TDP Technical Data
  Package; TM Technical Manual; Other other category of data,
  such as 'Provisioning', 'Configuration Management', etc.
- Item D. Enter name of system/item being acquired that data will
- Item E. Self-explainatory (to be filled in after contract award).
- Item F. Self-explainatory (to be filled in after contract award).
- Item G. Signature of preparer.
- Item H. Date CDRL was prepared.
- Item I. Signature of CDRL approval authority.
- Item J. Date CDRL was approved.
- Item 1. See DoD FAR Supplement Subpart 4.71 for proper numbering.
- Item 2. Enter title as it appears on data acquisition document cited in Item 4.
- Item 3. Enter subtitle of data item for futher definition of data item (optional entry).
- Item 4. Enter Data Item Description (DID) number, military specification number, or military standard number listed in DoD 5010.12-L (AMSDL), or one-time DID number, that defines data content and format requirements.
- Item 5. Enter reference to tasking in contract that generates requirement for the data item (e.g. Statement of Work paragraph number).
- Item 6. Enter technical office responsible for ensuring adequacy of the data item.
- Item 7. Specify requirement for inspection/acceptance of the data item by the Government.
- Item 8. Specify requirement for approval of a draft before preparation of the final data item.
- Item 9. For technical data, specify requirement for contractor to mark the appropriate distribution statement on the data (ref DoDD 5230.24).
- Item 10. Specify number of times data items are to be delivered.
- Item 11. Specify as-of date of data item, when applicable.
- Item 12. Specify when first submittal is required.
- Item 13. Specify when subsequent submittals are required, when applicable.
- Item 14. Enter addresses and number of draft/final copies to be delivered to each addressee. Explain reproducible copies in Item 16.
- Item 15. Enter total number of draft/final copies to be delivered.
- Item 16. Use for additional/clarifying information for items 1 through 15. Examples are: Tailoring of documents cited in Item 4; Clarification of submittal dates in Items 12 and 13; Explanation of reproducible copies in Item 14; Desired medium for delivery of the data item.

#### FOR THE CONTRACTOR

- Item 17. Specify appropriate price group from one of the following groups of effort in developing estimated prices for each data item listed on the DD Form 1423.
- a. Group I. Definition Data which is not otherwise essential to the contractor's performance of the primary contracted effort (production, development, testing and administration) but which is required by DD Form 1423.

Estimated Price - Costs to be included under Group I are those applicable to preparing and assembling the data item in conformance with Government requirements, and the administration and other expenses related to reproducing and delivering such data items to the Government.

b. Group II. Definition - Data which is essential to the performance of the primary contracted effort but the contractor is required to perform additional work to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, or quality of the data item.

Estimated Price - Costs to be included under Group II are those incurred over and above the cost of the essential data item without conforming to Government requirements, and the administrative and other expenses related to reproducing and delivering such data item to the Government.

c. Group III. Definition - Data which the contrator must develop for his internal use in performance of the primary contracted effort and does not require any substantial change to conform to Government requirements with regard to depth of content, format, frequency of submittal, preparation, control, and quality of the data item.

Estimated Price - Costs to be included under Group III are the administrative and other expenses related to reproducing and delivering such data item to the Government.

d. Group IV. Definition - Data which is developed by the contractor as part of his normal operating procedures and his effort in supplying these data to the Government is minimal.

Estimated Price - Group IV items should normally be shown on the DD Form 1423 at no cost.

Item 18. For each data item, enter an amount equal to that portion of the total price which is estimated to be attributable to the production or development for the Government of that item of data. These estimated data prices shall be developed only from those costs which will be incurred as a direct result of the requirement to supply data, over and above those costs which would otherwise be incurred in performance of the contract if no data were required. The estimated data prices shall not include any amount for rights in data. The Government's right to use data shall be governed by the pertinent provisions of the contract.

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			PACKAG	PACKAGING REQUIREMENTS				
PR, MIPR, OR DOCUMENT NUMBER	202	\ \ \ \	265		က <u>် ဂ</u>	3. INSTRUCTIONS TO CONTRACTING OFFICER: Insert appropriate clause(s) into Section D for applicable fram(s) as indicaded below.	ate	
number, or any other way of identifying a particular item. NIL-STO-2073-1 represents the last term "Item ID" refers to line item number, item name, NSVIMMAC, part number, or any other way of identifying a particular item. NIL-STO-2073-1 represents Military Preservation (PRES) and Packing (PACK!, Military packing consists of levels A, B, and Minimum (M.). ASTM 03951 could be substituted by another document if specified in Block 2. Quantity Per Unit Pack (QUP) and commercial Best Practice (CBP) are abbreviated. The reverse side of this form has the European Union environmental requirements.	ays be completed and further defin tem. MIL-STD-2073-1 represents N document if specified in Block 2. O rements.	ver defined in Blacks 2, 3, or 4. The esents Military Preservetion (PRES) i rck 2. Quantity Per Unit Pack (QUP)	and Packing (PACK). Mi and Commercial Best I	he term "Hem ID" refers to line item number, item neme, NSN/MMAC, part )) and Packing (PACK). Military packing consists of levels A, B, and Minimum P) and Commercial Bast Practice (CBP) are abbreviated. The reverse side o		AFMCFARS 5352.247-9005, SHIPPING CONTAINER MARKING. ITEM NAME(s)OR NSN/MMAC	G CONTAINER MARKING. ITEM	3
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N N	X 8 X			F007838023 80296	AFM	AFMCFARS 5352.247-9009, MILITARY PACKAGING AND MARKING. ITEM NAME(s) OR NSN/MMAC	Y PACKAGING AND MARKING.	
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100 Z50H	CBP INSTRUCTION NUMBER (X) FOL 304-76 18 980-36	AFMCFARS 5352.247-9007, SPECIFICATION COMMERCIAL PACKAGING (ASTM D3951). ITEM NAME(s) OR NSN/MMAC
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4. CODED DATA: Coded requirements shall be interpreted in accordance with MIL-STD-2073-1.		
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	AFMCFARS 6362.247-9011, PACKAGING AND MARKING OF HAZARDOUS MATERIAL, ITEM NAME(s) OR NENAMARY
	AFMCFARS 6352.247-9013, PACKAGING DATA (Coded and/or Special
4. CODED DATA: Coded requirements shall be interpreted in accordance with MIL-STD-2073-1.	OR NSN/MMAC
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PRESERVATION AND PACKAGING DATA SIZE: ALTERNATE PACKAGING - FOAH IN PLACE CLBE 18.39 CUBIC FEET OUTSIDE DIMENSION: 72 % x 22 % x 19 % CLASS: I STYLE: A SPECIFICATION: PPP-8-601 LEWEL: A.B.C TEMET Y/C MARKING SHALL BE IN ACCORDANCE WITH HIL-STD-|29 GROSS WEIGHT: 525.67 LBS INSIDE DIMENSION: 70 % , 20 % , 14 % GRADE: B SEE PARTS LIST CUSHION AND / OR DUNNAGE PRESERVATION COMPOUNDS NETHOD: I TYPE: DOMESTIC EXTERIOR CONTAINER CI, DI CLEANING AND DRYING IN ACCORDANCE WITH MIL-P-116 PRESERVE IN ACCORDANCE WITH HIL-P-116 P-19 ON BUSHINGS MIL-C-16173, GRADE 4 WASTICVETE OWERSEAS NOT APPLICABLE **(** (6) (2) BOND PADS WITH -047
(3) ASSEMBLE -OII BLOCKIN (1) LOCATE AND SECURE -021 BLOCKING ASSEMBLIES (10) LOCATE AND SECURE -051 BLOCKING ASSEMBLIES 9 (7) ASSEMBLE - OSI BLOCKING ASSEMBLY WITH FOUR (4) ASSEMBLE -021 BLOCKING ASSEMBLY WITH FOUR (12) LOCATE AND SECURE - 031 AND -041 CRADLE 16. MATCH MARK - 021 ASSEMBLY AS SHOWN 13. WRAP PART WITH -039 WRAPPING PAPER GENERAL NOTES (UNLESS OTHERWISE SPECIFIED) 15. PLYWOOD AND LUMBER CALL OUTS ARE 1. DIMENSIONAL TOLERANCES TO BE ± 1/8 INCH. TPO NUMBER TPO-01-167-0942 WILL ACTUAL DIMENSIONS. ON FACE OF DRAWING. OF DRAWING. ASSEMBLE -OII BLOCKING ASSEMBLY WITH ONE -005 34 INCH PLYMOOD PANEL AND TWO -035 ON FACE OF DRAWING. WATIONAL STOCK NUMBER 1620-01-167-0942. ACCOMMODATE PART NUMBER 1881 B4, ON FACE OF DRAWING. AND SECURE WITH . 043 TAPE AS SHOWN AND TWO -019 WOOD BLOCKINGS AS SHOWN ASSEMBLIES IN CONTAINER WITH ONE -OIT - DIS WOOD BLOCKINGS AS SHOWN ON FACE IN CONTAINER WITH TWO - 017 AND FOUR FACE OF DRAWING. IN CONTAINER WITH TWO - 017 AND FOUR PANEL AS SHOWN ON FACE OF DRAWING. SECURE -OIL BLOCKING ASSEMBLY TO END BOND -037 PAD TO END PANEL, AS SHOWN ON -009 % INCH PLYWOOD PANELS AND ONE -025 RUBBER PAD AS SHOWN ON FACE OF DRAWING. ON FACE OF DRAWING. ASSEMBLE - OHI BLOCKING ASSEMBLY WITH SIX ASSEMBLE -031 BLOCKING ASSEMBLY WITH RUBBER PADS AS SHOWN ON FACE OF DRAWING. -019 WOOD BLOCKINGS AS SHOWN ON FACE OF DRAWING. PADS AND TWO -029 RUBBER PADS AS SHOWN SIX -013 34 INCH PLYWOOD PANELS, FOUR PAD AS SHOWN ON FACE OF DRAWING. -007 % INCH PLYWOOD PANELS AND ONE -023 -015 34 PLYWOOD PANELS, FOUR -033 RUBBER PAOS AS SHOWN ON FACE OF DRAWING. -027 RUBBER PADS AND TWO - 029 RUBBER © ©©©©©© 19. STENCIL IN ONE MCH HIGH BLACK CHARACTERS 18. STENCIL ON BOTH SIDES IN ONE 17. MATCH MARK -OSI ASSEMBLY AS SHOWN SAN OBANOS HEROS SERVICES OF THE SERVICES OF T FACE OF DRAWING. MIMBER, TPO -01 - 167 - 0942. TPO NUMBER TPO-01-167-0942" INCH HIGH BLACK CHARACTERS TPO -041 -031 -021 PROJECT TO A PROJE Š E S CONTAINER-PISTON, MLG, ASSY OF BLOCKING ASSI

PARTE, PETHODO, MN. P. 330, LABOUR B, 20 % LA.

PARTE, PETHODO, MN. P. 530, LABOUR B, 20 % LA.

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COMMER, LEGIS B, LABOUR B, 20 % LABOUR B, 20 HANGACTURER PART NUMBER MIT DEE BLOCKING, FLYWOOD, NN-P-3XQ GROUP B
BLOCKING, PRYWOOD, NN-P-3XQ GROUP B
19 1/4 LG 13/4 74K 1-1/2 WD
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ADHESIVE, MMM- A- 1617, TYPE I, RUBBER BASE
DA EQUINALENT ADHESIYE, MMM- A- 1617, TYPE I, RUBBER B OR EQUINALENT BAND, 66-5-781 STEEL, TYPE I CLASS I, REGULAR DUTY, YE & DOZD FMSH A WAP, MIL-B-121, GRADE A, CLASS 2, THE OPTIONAL AFT YOKE ASSY TAPE, PPP-T-60, TYPE III, CLASS 2 OR EQUIVALENT -043

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NOMENCLATURE OR DESCRIPTION

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GROUP B, 20 76 161 -007

WERE SO SHORE. RUBBER, SO SHORE,

-023 -025 -027 -029 -037 -039

SSQ GROUP B

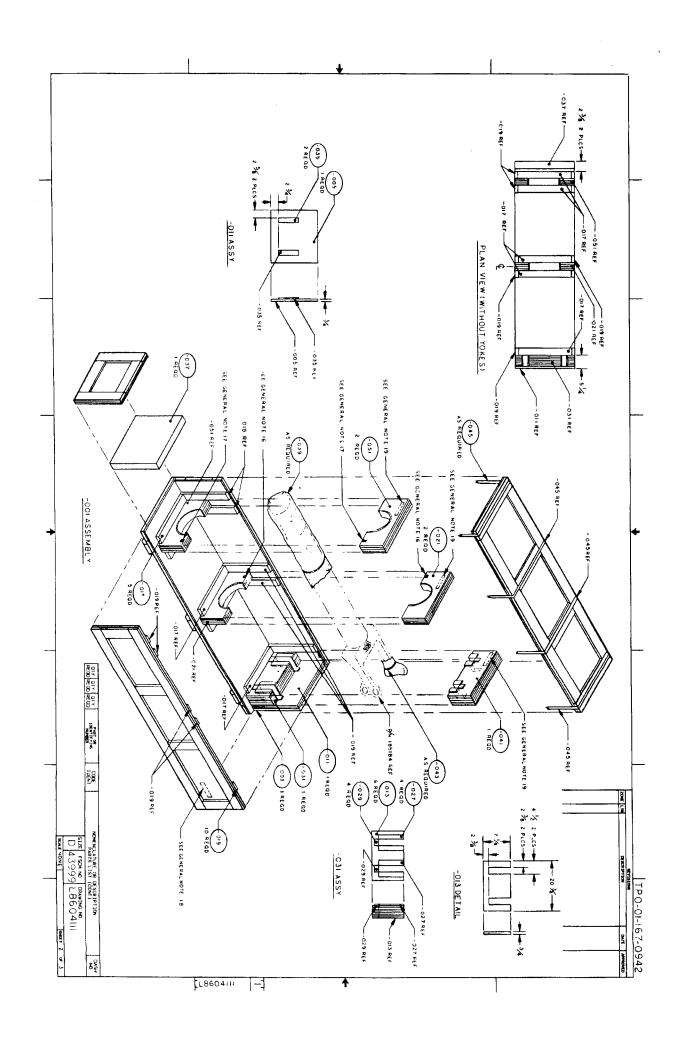
TP0-01-167-0942

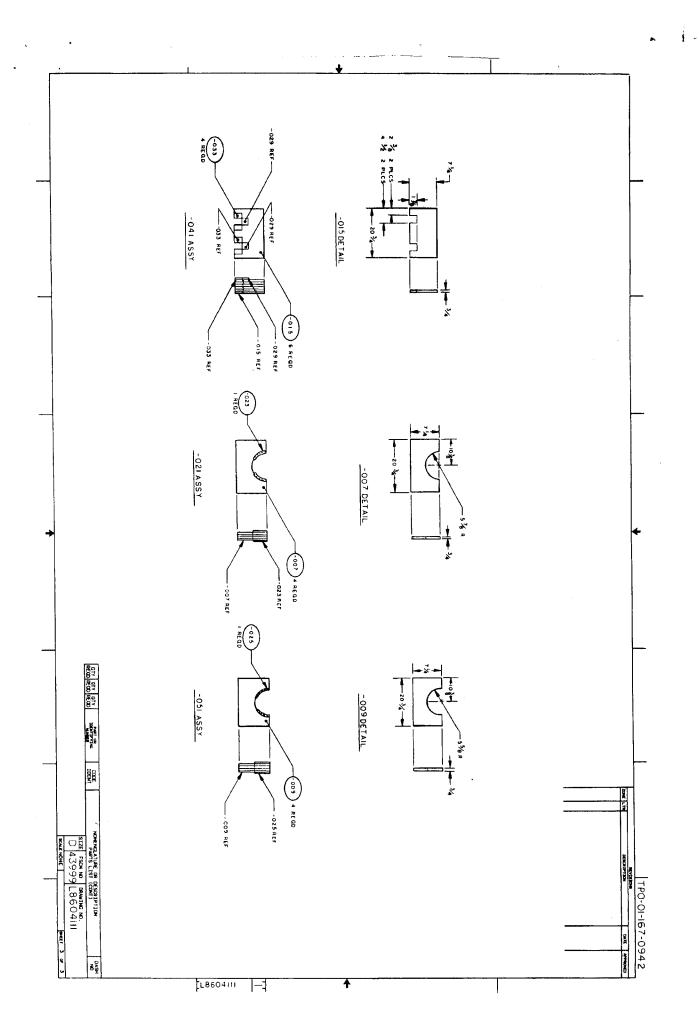
MONANT 31VC

3



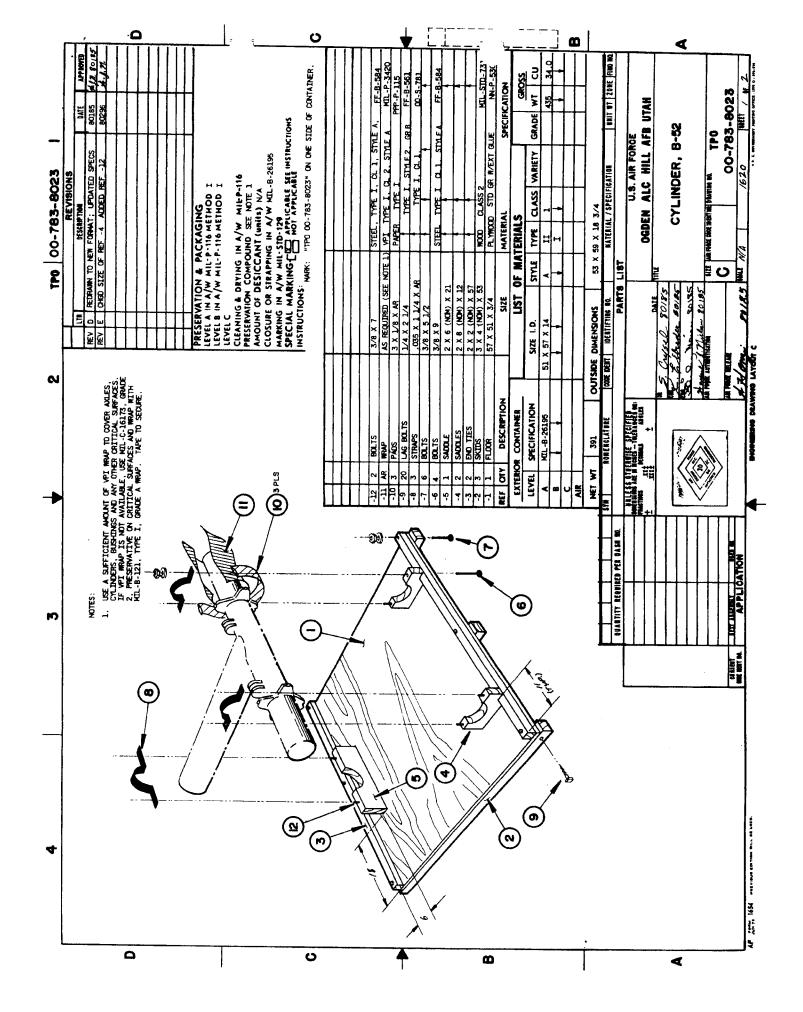
-05/

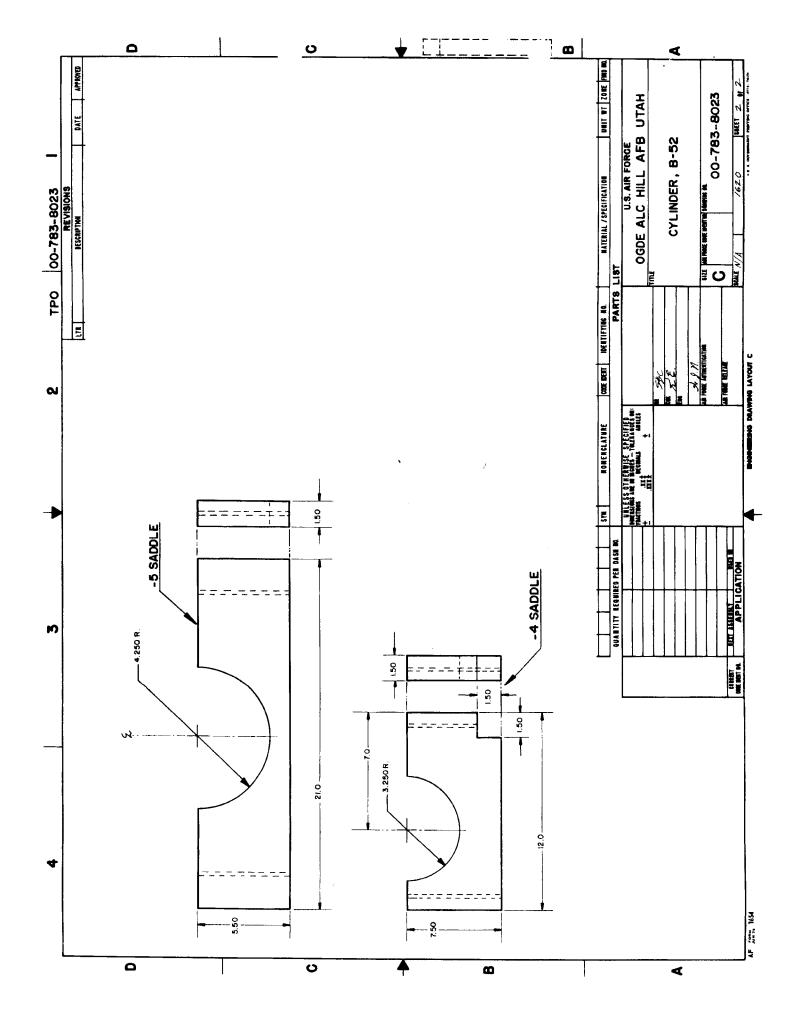




SPECIAL PACKAGI	NG INSTRUC	CTION	CODE ID 81205	SPI NO.(TP 00-771-8 SHEET 1 OF	827
PART OR DRAWING NO. NATIO 5-71661-503• 1620	ONAL STOCK NO. -00-771-8827	CURRENT REV	CHK S. CRYSEL	S. Crysel T. P. Burnitt	
ITEM NOMENCLATI	JRE	ORIGINAL	ENCK P. BURNII	DERX Elle	
PISTON, LANDIN	G GEAR	DATE 84033	AUIN N. ELBNAL	JENY & Me	lu
PRESERVATION IAW MIL-P-II6 LEVEL A METHOD I LEVEL B METHOD I LEVEL C METHOD I  CLEANING C-1 DRYING D-1 PRESERVATIVE MIL-P-3420 MARKING IAW MIL-STD-I29 SPECIAL MARKING: SPI NO. 00-771-8827 MARK THE SPI NUMBER ON CONTAINER.  •ADDITIONAL P/N 5-71661-5  •SOURCE OF SUPPLY FOR THE CATALOG NO. MS-98398: CAI 31	ONE SIDE OF THE  OA  DRQUE WASHER,  RR FASTENER CO.  AMES STREET  MBRIDGE, MA 02142	PACKING AS LEVEL  A MIL-B- B MIL-B- C MIL-B- CROSS CU CROSS WT DESIGN FRA CTNR 1.D. CTNR 0.D. ITEM DIM ITEM WT LE NOTES: 1. SECURI TO FF-N- 2. COVER OVERWRAI	SPEC STYL -26195IMOD) A -26195IMOD) A -26195IMOD) A LEVEL A FT 12.7 LBS 155 CILITY 120 LENCTH 15 IN. 17 IN. 63 IN. 35 85 E -2 TO -4 USINI -105, TYPE II, STYL YOUR MICROFI ICE FILE TO DE	12.7 12 155 19 G. 120 G. WIDTH DE 66 IN. 68 IN. 12½ IN.  G 3D NAILS CONFORM LE 1.  REAS WITH ~17 AND RE BOTH WITH TAPE,	-19. SS SPI
-20 3 CHAFFING STRIPS	AS REQUIRED X 3	PAPER	TYPE I		PP-P-115
	AS REQUIRED X 1/2				PP-T-97
	AS REQUIRED			S I, GRADE A, FIN I	L-P-378
	AS REQUIRED			C, MIL-P-3420 DI	
	1¼ X 0.035 X 16		CL 1, TYPE I, HVY		0-5-781
	TO FIT % BOLTS	STEEL			-98398
	1/4	STEEL	TYPE A, GR I, CL		W-92
-13 10 WASHERS	<del>¾</del>	STEEL	TYPE A, GR I, CL		W-92
	2½ X ¼	STEEL	TYPE I, STYLE 1,		B-561
	6 X 1/8	STEEL	TYPE I, CLASS I,		-B-561 -B-584
-11 6 BOLTS -10 2 BOLTS	7 X 3/8	STEEL	TYPE I, CLASS I,		
-9 2 BOLTS	9 X 3/8	STEEL	TYPE I, CLASS I,		-B-584 S
-8 1 BLOCK	2 X 2 INOM1 X 12	WOOD	CLASS 2		_CTD_721 \
-7 2 HEADERS	2 X 2 INOM1 X 66	WOOD	CLASS 2		-STD-731
-6 1 BLOCK	1 X 4 (NOM) X 12	WOOD	CLASS 2		-STD-731 d
-5 1 SADDLE	2 X 6 (NOM) X 15	WOOD	CLASS 2		-STD-731
			CLASS 2		-STD-731
	2 X 8 (NOM) X 15	W00D			L-STD-731
-3 3 SKIDS	4 X 4 (NOM) X 17	WOOD	CLASS 2		
-2 2 SADDLE REINFORCEMENTS	15 x 7½ x ¾	PLYWOOI			NN-P-530
PART OTY NOMENCLATURE OR DESCRIPTION	66 X 15 X ½	PLYWOOI		PECIFICATION '	NN-P-530

# SPECIAL PACKAGING INSTRUCTION CODE ID SPI NO. (TPO ) 81205 00-771-8827 (CONTINUATION SHEET) ITEM NOMENCLATURE SHEET 2 OF 2 PISTON, LANDING GEAR 2**%**A 11/2-11/2-5½ TYP TYP -16 -18 -17 -11 -19





•						
CDECT DA	NATIO DIOMBILO	uov.	CODE	D	SPI NO.	(TPO)
SPECIAL PAC	CKAGING INSTRUCT	ION	98747		F01-304	-7618
					SHEET 1	L OF 3
PART OR DRAWING NO.	NATIONAL STOCK NO.	CURRENT REV			C 900	متعمد
388058-19	1620-01-419-9739	A		ELLIS	ON C	1
ITEM NOME	NCLATURE	ORIGINAL		EDWAR W. OLSI		akson
LANDING GEAR	, RETRACTABLE	DATE 94297		BRIMH		Mali
MILITARY PRESERVATIO	N IAW: MIL-STD-2073	PACKING AS	SPECIFIED	BELOW	AND BILL D	IF MATERIALS
SERVICEABLE METHOD 20		LEVEL SPE	EC	STYLE	TYPE CL	VRTY GR
UNSERVICEABLE METHOD	10	A MIL-B-261	95 (MOD)	Α	II 1	I
QUP 001		B MIL-B-261	.95 (MDD)	Α	I 1	I
ICQ 000			i.	EVEL 6	A LEVEL B	
CLEANING & DRYING IAW:	MIL-STD-2073	GROSS CU F	Ţ	23.639	23.639	
PRESERVATIVE MIL-C-161	73. CLASS II GRADE 2	GROSS WT L		325	325	
	·	DESIGN FRA	GILITY G	100	100	250711
MARKING IAW MIL-STD-1	29			LENGTH	H WIDTH	DEPTH
SPECIAL MARKINGS:		CNTR L.D.		62	35	13
A) SPI ND. F01-304-7618		CNTR (I.D.		64	37	17 1/4
*MARK THE SPI NUMBER ON DNE						
B) CAUTION: LIFT BY						
C) TO OPEN, REMOVE E	BOTTOM LAG BOLTS	ITEM DIM	_	58	58	10
CLOSURE I.A.W. MIL-B-	26195	ITEM VT LE	3S 215			
					REVISIONS	
		Ļ	TR CUC A		PIPTION ATE & PEVIS	DATE

#### NOTES:

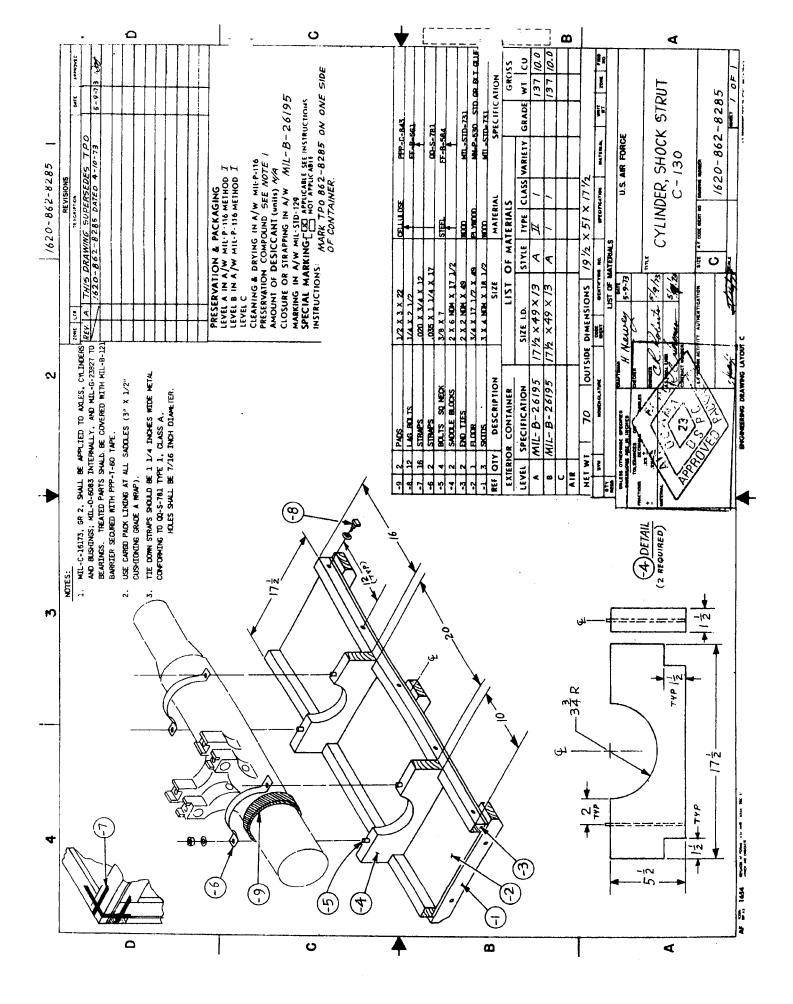
1. APPLY MIL-C-16173 TO AXLES AND BUSHINGS. COVER WITH MIL-B-121, TYPE I, GRADE A, CLASS OPTIONAL BARRIER AND SECURE WITH A-A-1682 TAPE TYPE I OR II.

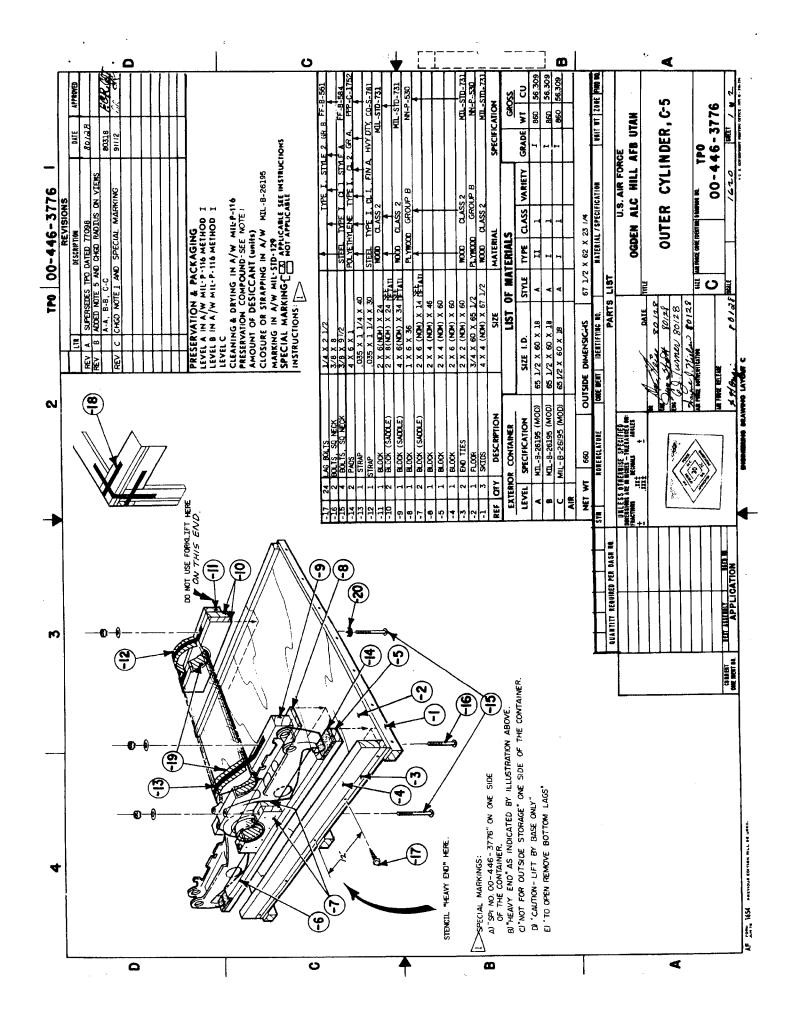
	REVISIONS	
LTR	DESCRIPTION	DATE
Α	CHG. NSN,UPDATE & REVISE	98036
		<del> </del>

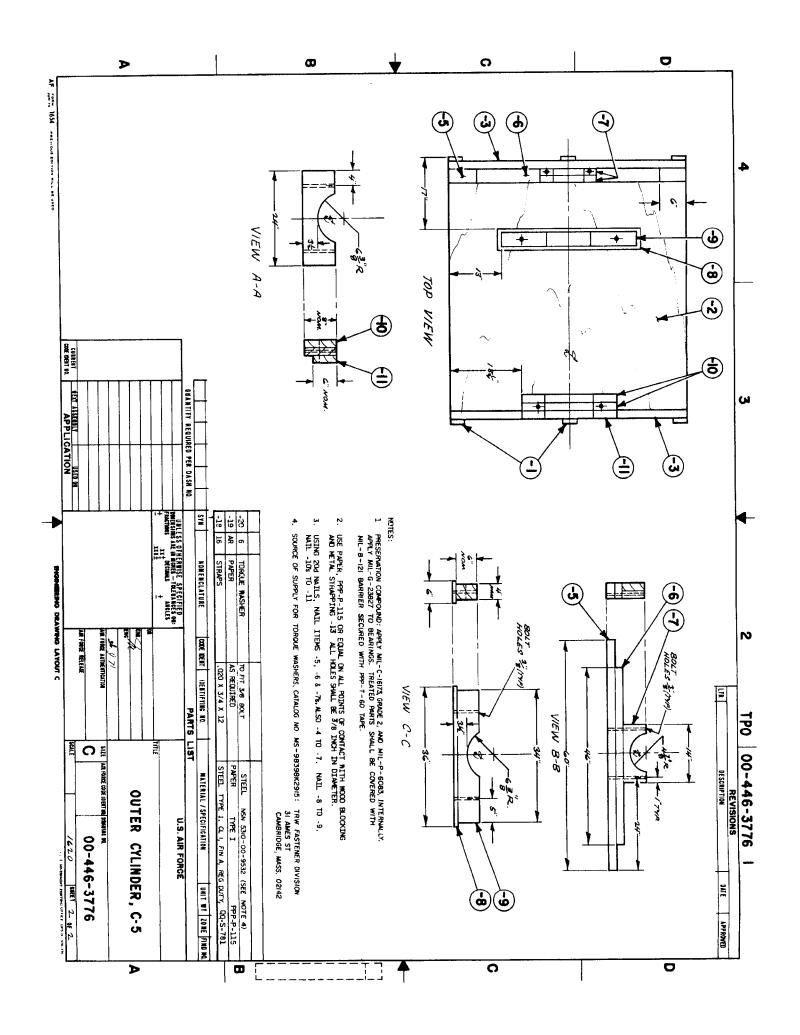
1					1
-15	12	NUTS	3/8	FF-N-836 TYPE II, STYLE 4	
-14	18	CORNER STRAPSCLEVEL A DHLYS	3/4 X .028 X 12	ASTM D3953 TYPE 2, REG. DUTY, FINISH A	
-13		CUSHIONING		PPP-P-115 TYPE I	
-12	12	WASHERS	3/8	FF-W-92 TYPE A, GRADE I, CLASS A	1
-11	20	WASHERS	1/4	FF-W-92 TYPE A, GRADE I, CLASS A	图
-10	50	LAG BOLTS	1/4 X 2 1/2	FF-B-561 TYPE I, STYLE 1, GRADE B	3
-9	3	STRAPS	1 1/4 X .035 X A/R	ASTM D3953 TYPE I, REG. DUTY, FINISH A	1
-8	6	BOLTS	3/8 X 5 1/2	FF-B-584, TYPE I, CLASS I, STYLE A, REGULAR	
-7	4	BOLTS	3/8 X 5	FF-B-584, TYPE I, CLASS I, STYLE A, REGULAR	쑱
-6	2	BOLTS	3/8 X 7	FF-B-584.TYPE I. CLASS I. STYLE A.REGULAR	
-5	1	BASE	62 X 35 X 3/4	A-A-55057 TYPE A	7618
-4	1	SADDLE (SEE DETAIL)	2 X 6 (NOM) X 11	MIL-STD-731 CLASS 2	٦٣
-3	2	SADDLES (SEE DETAIL)	2 X 4 (NOM) X 13 1/2	MIL-STD-731 CLASS 2	_
-2	2	END TIES	2 X 2 (NOM) X 62	MIL-STD-731 CLASS 2	_
-1	3	SKIDS	3 X 4 (NDM) X 37	MIL-STD-731 CLASS 2	4
P/N	QTY	NOMENCLATURE	SIZE	MATERIAL SPECIFICATION	
'''	REQD	DESCRIPTION	(INCHES UNLESS SPECIFIED)	REVISIONS	

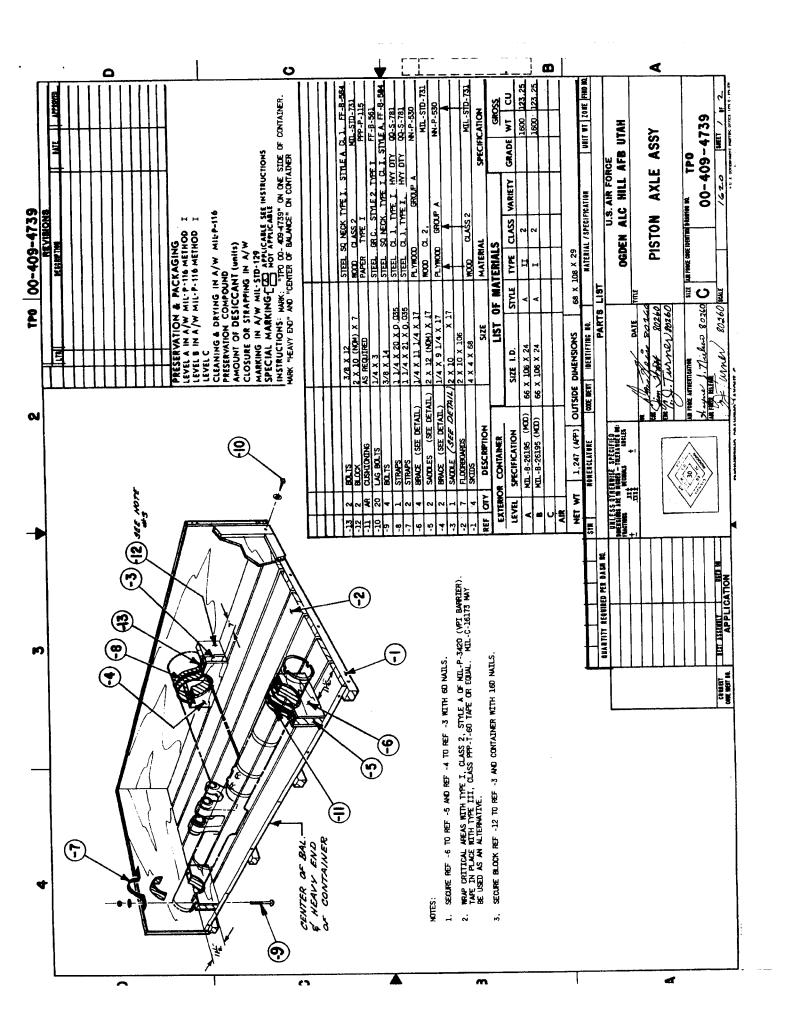
	CODE IN	SPI NO. (TPO)
SPECIAL PACKAGING INSTRUCTION		
	98747	F01-304-7618
ITEM NOMENCLATURE		פטרבד - חר ז
LANDING GEAR, RETRACTABLE		SHEET 2 OF 3
LANDING GEAR, RETRACTABLE  -9 -12 -13 TYP  -7 -12 -15 TYP  16 3/4 2 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10	STRAI	TYP 3 PLCS

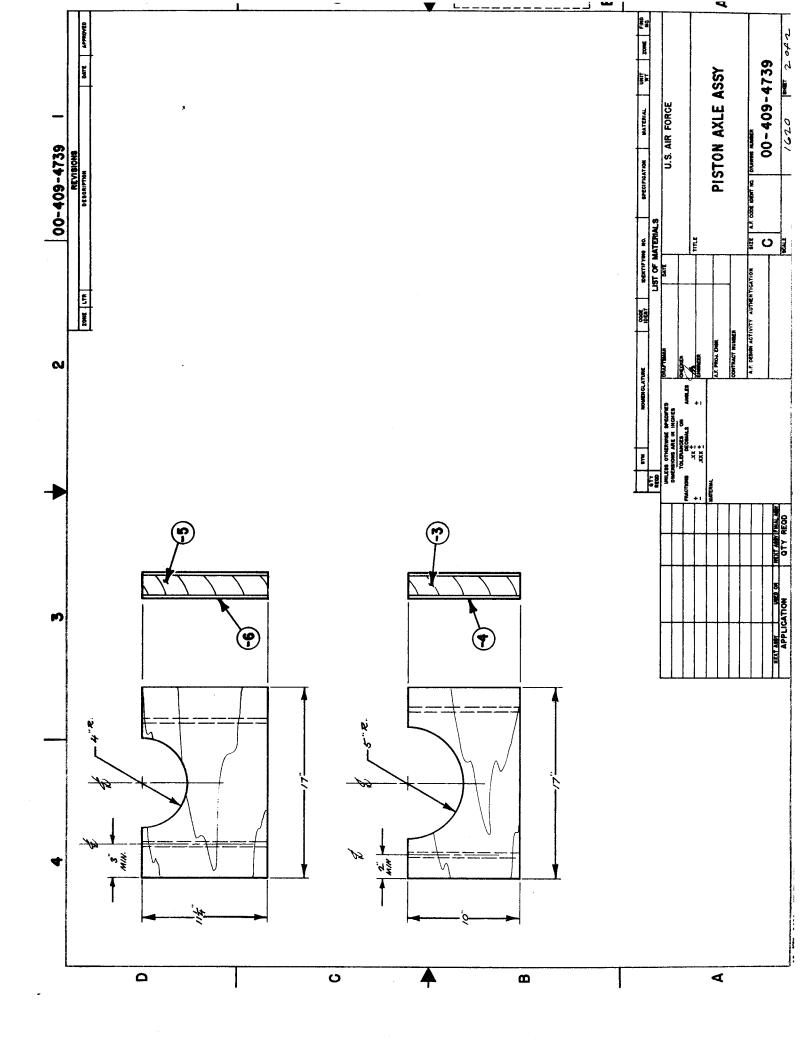
## CODE ID SPI NO. (TPO) SPECIAL PACKAGING INSTRUCTION 98747 F01-304-7618 ITEM NOMENCLATURE 3 OF 3 SHEET LANDING GEAR, RETRACTABLE 3 1/2 R 1 3/16 -1 5/8 -1 5/8 LEVEL A ONLY 13 1/2 -DETAIL (2 REQ) 2 1/2 TYP -1 3/4 R 5 1/2 DETAIL (1 REQ)











SIZE

PART

NO. REGO

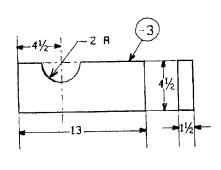
GTY

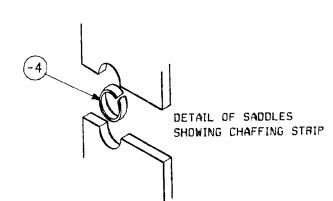
NOMENCLATURE OR

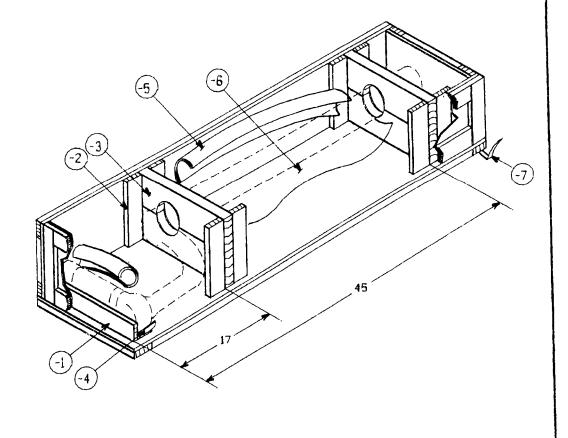
DESCRIPTION'

MATERIAL SPECIFICATION

SPECIAL PACKAGING INSTRUCTION (CONTINUATION SHEET)	CODE ID 76301	SPI NO.(TPO) 01-023-2138
ITEM NOMENCLATURE PISTON		SHEET 2 OF 2







		<u> </u>		
SPECIAL PACKAGING INSTRUCT	TION	CODE ID 98747	SPI NO. F01-235	
			SHEET 1	DF 3
PART OR DRAWING NO. NATIONAL STOCK NO. 1620-01-235-2271  ITEM NOMENCLATURE	CURRENT REV A DRIGINAL	1	ERMAN TSM	nmerman
PISTON, MLG, F-15	DATE	ENGR, M. STEP	<u> </u>	garing
	95131	AUTH, P. FRAN	CIS (ZJA	CARDINO
MILITARY PRESERVATION IAW MIL-STD-2073  SERVICEABLE METHOD: 20 UNSERVICEABLE METHOD: 20	PACKING AS LEVEL SPE A ASTM-I			MATERIALS TY GR TR
QUP 001 ICQ 000	B ASTM-I	D6251 A1	III i	Ā
CLEANING & DRYING: IAW MIL-STD-2073	CDEEC OU F	LEVEL		_ i
PRESERVATIVE: MIL-PRF-16173, GR2	GROSS CU F GROSS WT L			1
MARKING IAW MIL-STD-129	DESIGN FRAC		110	
SPECIAL MARKINGS:		LENG		DEPTH
A) SPI NO. F01-235-2271	CNTR I.D.	49	19	12 1/2
■MARK THE SPI MUMBER ON DINE SIDE OF THE CONTAINER AND ON ALL REMOVABLE DUNNAGE.	CNTR □.D. LEVEL A	51	21	18
CLOSURE	LEVEL B	51	21	18
LEVEL A: IAW: ASTM-D6251	ITEM DIM	45	14 1/2	9 1/2
LEVEL BI IAW ASTM-D6251	ITEM WT LB	88 2		
		REVIS	SIONS	
	LTR	DESCRIPTION		DATE
	A UPDATE	ED, ADDED WOOD	STATEMENT	03105
l	LL			1

<u> </u>					<b> </b> -
-4	1	CUSHION (CENTER)	49 X 19 X 8	MIL-PRF-26514 TYPE 1, CLASS 1, GR A, FIN 1	
-3	2	CUSHIONS (TOP & BOTTOM)	49 X 19 X 2	MIL-PRF-26514 TYPE 1, CLASS 1, GR A, FIN 1	12
-2	1	WRAP	50 X 50	A-A-3174, TYPE I, CLASS 1, GRADE A, FIN 1	1~
-1	3	SKIDS	21 X 4 (NOM) X 4	ASTM-D6199 CLASS 2, GROUP 1	[밝
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE	MATERIAL SPECIFICATION	227
	KLUD	DE 2CKTL LION	(INCHES UNLESS SPECIFIED)	REVISIONS	

SPECIAL PACKAGING INSTRUCTION	CODL גו 98747	SPI NO. (TPO) F01-235-2271
ITEM NOMENCLATURE PISTON, MLG, F-15		SHEET 2 OF 3

#### EUROPEAN UNION (EU) REQUIREMENTS NOTICES

NOTICE 1: LUMBER AND PACKAGING/CONTAINER STATEMENT — "ALL WOODEN LUMBER CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.

NOTICE 2: WOODEN PALLET STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 133 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.

NOTICE 3: HARDWOOD SPECIES STATEMENT - "ALL WOODEN PALLETS PRODUCED ENTIRELY OF NON-MANUFACTURED HARDWOOD SPECIES SHALL BE IDENTIFIED BY A PERMANENT MARKING OF "NC" (NON-CONIFEROUS), 1.25 INCHES OR GREATER IN HEIGHT, ACCOMPANIED BY THE CAGE CODE OF THE CONTRACTED MANUFACTURER AND THE MONTH AND YEAR OF THE CONTRACT. ON PALLETS, THE MARKING SHALL BE APPLIED TO THE STRINGER OR BLOCK ON OPPOSITE SIDES AND ENDS OF THE PALLET AND BE CONTRASTING AND CLEARLY VISIBLE."

#### NOTES

- 1. USE MIL-C-16173, GRADE 2 ON CRITICAL SURFACES. WRAP ENTIRE ITEM IN REF.-2.
- 2. CUT REF.-4 TO SHAPE OF PISTON CENTERED ON CUSHION. PLACE WRAPPED ITEM INTO CUT OUT. REF.-4. INSERT INTO CONTAINER AS ILLUSTRATED.
- 3. SKIDS INSET ONE INCH EACH END WITH SKIDS RUNNING THE WIDTH OF THE CONTAINER, CENTER SKID.

SPECIAL PACKAGING	INSTRUCTION	DE ID 98747	SPI NO. (TPO) F01-235-2271
ITEM NI PISTO	OMENCLATURE N, MLG, F-15		SHEET 3 OF 3
-4	TITEM REFERENCE CONTRACTOR OF THE PROPERTY OF		-3

•				_				
SPECIAL PAC	KAGING INSTRUCT	'ION		CODE			ND. (TP 235-22	
DI BOILD I III	imidilia ilibilia			987	(4)	SHEET	1 OF	
PART OR DRAWING NO.	NATIONAL STOCK NO.	CU	RRENT	ILL.	C. CHA		C. Chail	
68A412704-1001	1620-01-235-2273		REV A	снк.	T. ZIM	MERMAN T	an → ¬¬ · `	
ITEM NOME	NCLATURE		IGINAL	ENGR.	M. STE	PHENS 2	Stop	lens
PISTON, ML	_G, F-15E		DATE 10094	AUTH.	P. FRA	NCIS (	Frank	Ax
MILITARY PRESERVATIO	N IAW MIL-STD-2073	PACK	ING AS	SPECIFIE	D BELO	W AND BILL	OF MAT	ERIALS
	=-	LEVEL	. SPE	EC	STYL	E TYPE CL	VRTY (	R TR
	20	A B	ASTM-		A	III 2		В
QUP 001 ICQ 000		Б	ASTM-	NP521	A 1 F			n A
CLEANING & DRYING: IAW M	TI _CTN_2072	GRUSS	CU FT			VEL A 3.521	LEVEL 8.521	- 1
PRESERVATIVE MIL-C-161	22 012 2070	GROSS	WT LBS			148	148	
	·	DESIG	N FRAGILI	ry G		100	100	
MARKING IAW MIL-STD	1-129				LENGTH	VIBT	H DE	PTH
SPECIAL MARKINGS		CNTR	I.D.		48	17	:	11
A) SPI NO. F01-235-2273		CNTR	D.D.					
#MARK THE SPI NUMBER ON ONE AND ON ALL REMOVABLE DUNN	SIDE OF THE CONTAINER AGE.		EL A		50	19		1/2
CLOSURE			EL B		50	19		1/2
LEVEL A: IAW ASTM-D625	<b>31</b>	ITEM I			45 1/2	_	7	1/2
LEVEL BI IAW ASTM-D625	i1	ITEM '	WT.		89 LE	<b>3S.</b>		
OFF NUTEO DAGE O					REVISIO			
SEE NOTES PAGE 2.		LTR			SCRIPTI		500	DATE
		A	מסטע עעג	STATEM	ENT &	UPDATE SP	FCZ	03120

					1
-7	2	CHAFFING STRIPS	15 X 3	PPP-P-115 TYPE 1	1
-6	1	SADDLE	2 X 6 (NDM) X 16 7/8	ASTM-D6199 GROUP 1, CLASS 2	[뚠
-5	1	SADDLE	2 X 6 (NOM) X 16 7/8	ASTM-D6199 GROUP 1, CLASS 2	
-4	5	SADDLES	2 X 6 (NOM) X 16 7/8	ASTM-D6199 GROUP 1, CLASS 2	1
-3	8	IN SIDE CLEATS	1 X 3 (NDM) X 10 3/4	ASTM-D6199 GROUP 1, CLASS 2	
-2	1	WRAP	AS REQUIRED	A-A-3174 TYPE 1, CLASS 1, GRADE A, FINISH 1 ASTM-D6199 GROUP 1, CLASS 2	اران
-1	3	SKIDS	3 X 4 (NOM) X 19	ASTM-D6199 GRDUP 1, CLASS 2	]땆
P/N	QTY REQD	NOMENCLATURE DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	12/3

SPECIAL PACKAGING INSTRUCTION	CODE ID 98747			(TP) -227	
ITEM NOMENCLATURE PISTON, MLG, F-15E		SHEET	2	ΩF	3

#### EUROPEAN UNION (EU) REQUIREMENTS NOTICES

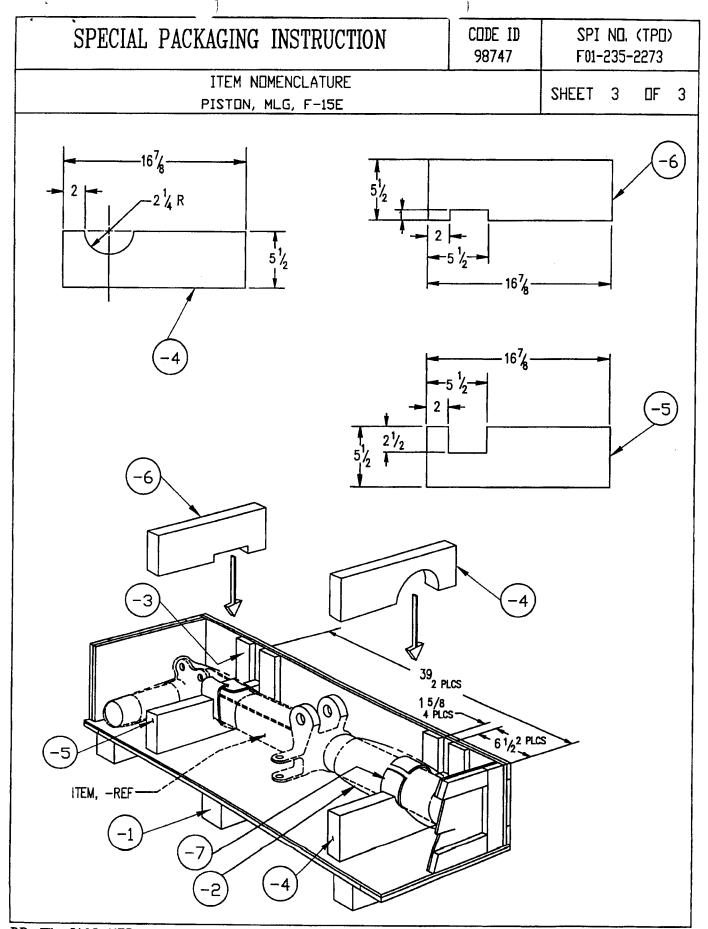
NOTICE 1: LUMBER AND PACKAGING/CONTAINER STATEMENT — "ALL WOODEN LUMBER CONTAINERS PRODUCED ENTIRELY OR IN PART OF NON-MANUFACTURED SOFTWOOD SPECIES SHALL BE CONSTRUCTED FROM HEAT TREATED (HT) MATERIAL (HT TO 56 DEGREES CENTIGRADE OR 1.33 DEGREES FAHRENHEIT FOR 30 MINUTES). CERTIFICATION IS REQUIRED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). CONSTRUCTION AND CERTIFICATION SHALL BE IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS, BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS,USDA.GOV.

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#### NOTES

- WRAP PRESERVED AREAS IN REF -2 AND SECURE WITH TAPE CONFORMING TO A-A-883, TYPE II OR EQUAL.
- 2. WRAP CHAFFING STRIP, REF -7, ARDUND ITEM WHERE IT WILL CONTACT THE SADDLES AND SECURE WITH TAPE CONFORMING TO A-A-883, TYPE II OR EQUAL.



	•				
SPECIAL PAC	KAGING INSTRUCT	'ION	CODE ID 98747		IO. (TPO) 252-4042
				SHEET 1	OF 2
PART OR DRAWING NO.	NATIONAL STOCK NO.	CURRENT REV	ILL. T. LUCE	1 -	2
2007602-103	1620-01-252-4042	В	CHK. T. ZIMM	IERMAN T	memorman
ITEM NOME	NCLATURE	DRIGINAL	ENGR. K.W. OL	SON A. W	allson
PISTON A	SSEMBLY	DATE 89167	AUTH. A. BRIM	THALL IN THE	2 Olson
MILITARY PRESERVATION	N IAV MIL-STD-2073	PACKING AS	SPECIFIED BELO	,	OF MATERIALS
SERVICEABLE METHOD	20	LEVEL SI	PEC STYLE	TYPE CL	VRTY GR
UNSERVICEABLE METHOD	20	A PPP-B-62	21 (MOD) 4	2	A
QUP 001		B PPP-B-62	21 (MOD) 4	1	В
ICQ 000			LEVEL	A LEVEL	В
CLEANING & DRYING IAW	MIL-STD-2073	GROSS CU F	T 2,474	2,474	
PRESERVATIVE MIL-F	PRF-16173, GR 2, CODE 02	GROSS WT I	_BS 54	54	
I KESEKVATIVE THE	(1 10175, div e, 612e 62	DESIGN FRA	GILITY G 100		
MARKING IAW MIL-STD-1	29		LENGTH	WIDTH	DEPTH
SPECIAL MARKINGS:		CNTR I.D.	35	11	8
A) SPI NO. F01-2	252-4042	CNTR D.D.	38	12 1/2	9
MARK THE SPI NUMBER ON ONE SI	DE OF THE	ITEM DIM	32	9	5 1/2
CONTAINER AND ON ALL REMOVABLE MARK REUSABLE CONTAINER DO NO		ITEM VT LI	35 31		
1 1881 ILOUIDEL CHITTING DE 110					

### CLOSURE IAW PPP-B-621 CAUTION NOTICE

#### NOTES:

1. APPLY MIL-PRF-16173, GRADE 2 PRESERVATIVE ON ALL BARE METAL SURFACES, INCLUDING INSIDE HOLLOW TUBE OF THE PISTON ASSEMBLY. INSURE ALL SURFACES ARE COMPLETELY COVERED. WRAP PRESERVED EXPOSED SURFACES WITH -5 AND SECURE IN PLACE WITH A-A-883 TAPE OR EQUAL.

	REVISIONS	
LTR	DESCRIPTION	DATE
Α	ADD NOTES & UPDATE	99129
R	UPDATE/ADD WOOD STATEMENT	01320

2. SOURCE OF SUPPLY FOR TORQUE WASHERS, CATALOG NO. MS-98398K2915; TRW FASTENER DIV.

31 AMES ST.

CAMBRIDGE, MASS. 02142, DR LOCAL PURCHASE

3. PISTONS PACKED IN PREVIOUS ADDITIONS OF THIS SPI DO NOT REQUIRE REPACKING IF THE INTEGRITY OF THE SPI IS NOT COMPROMISED.

NOTICE 1: TRAFFIC MANAGEMENT OFFICES OR ANY ACTIVITY BUYING SOLID WOOD MATERIAL TO USE FOR BUILDING OR ASSEMBLING PACKAGING MUST COMPLY WITH THE FOLLOWING REQUIREMENT FOR PURCHASING THE WOOD: "ALL WOODEN PALLETS AND WOOD CONTAINERS PRODUCED OF NON-MANUFACTURED WOOD SHALL BE CONSTRUCTED FROM HEAT TREATED (HT TO 56 DEGREES CENTIGRADE FOR 30 MINUTES) MATERIAL AND CERTIFIED BY AN ACCREDITED AGENCY RECOGNIZED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) IN ACCORDANCE WITH NON-MANUFACTURED WOOD PACKING POLICY AND NON-MANUFACTURED WOOD PACKING ENFORCEMENT REGULATIONS BOTH DATED MAY 30, 2001." THESE DOCUMENTS CAN BE FOUND AT WWW.APHIS.USDA.GOV.

l .					
-12	A/R	TAPE	1 X A/R	A-A-883 TYPE I DR II	
-11		NUTS	3/8	FF-N-836 TYPE II, STYLE 4	14
-10	6	WASHERS	3/8	FF-W-92 TYPE A, GRADE I, CLASS A	Ķ
-9	6	TORQUE WASHERS	to fit 3/8 BOLT	5310-00-936-9532 (SEE NDTE 2)	F01
-8	6	BOLTS	3/8 X 5	FF-B-584 TYPE I, CLASS 1, STYLE A	ı
-7	3	STRAPPING	A/R X 1 1/4 X .035	ASTM-D3953 TYPE I, REG DUTY, FIN B	25
-6	3	CUSHIONING	A/R X 3 X 1/4	PPP-PRF-115 TYPE I (CARGO PACK)	12
-5	1	WRAP	20 X 12	MIL-PRF-121 TYPE I, GRADE A, CLASS 1	4042
-4	1	WRAP	8 X 8	MIL-PRF-121 TYPE I, GRADE A, CLASS 1	N
-3	2	SADDLES	2 X 4 (NOM) X 8	ASTM-D6199 CLASS 2	i
-2	1	SADDLE	2 X 4 (NDM) X 7	ASTM-D6199 CLASS 2	
-1	2	TOP & BOTTOM	36 1/2 X 12 1/2 X 1/2	A-A-55057 TYPE A	
P/N	QTY REQD	NOMENCLATURE OR DESCRIPTION	SIZE (INCHES UNLESS SPECIFIED)	MATERIAL SPECIFICATION	

# CODL ID SPI NO. (TPO) SPECIAL PACKAGING INSTRUCTION 98747 F01-252-4042 ITEM NOMENCLATURE 0F 2 PISTON ASSEMBLY SHEET 2 NSN'S THAT APPLY 1 1/2 RAD. 1620-01-252-4042 4 1/2-1620-01-071**-**0538 1620-01-445-6131 1 1/8 RAD. <del>|</del>4−2 1/2-<del>></del>| SEE DETAIL SEE DETAIL

PEVICION.	10						Z	FNGINEERING	DATA LIST		* HISTORY *
DATE: 08MAR02	DATA TECH:	SDD	lo_	RGN S	ORGN SYMBOL:	11	۱ ا			APPLICATION: B-1B	PAGE 1 OF 1
CAGE: MANUFACT 13002 GOODRICH	MANUFACTURER NAME: GOODRICH		-			× -	REFERE 1881B4	REFERENCE NR: 1881B4	NOUN :	NOUN : PISTON, LANDING GEAR	NSN : 1620011670942
CAGE DRAWING NUMBER	NUMBER	REV	V SHE	WR SETS	NR NR FURN DIST SHEETS CARDS CODE CODE	FURN	DIST	NOUN		REQUIREMENTS	
13002 1881B4		Ξ.	-	0001	0000	S		PISTON ASSEMBLY			
13002 01-89		E	<b>↓</b>	2000	0000	S		ECO			9
13002 188184	/	Ω	├	1000	0000	s	<u> </u>	PISTON FORGING			
13002 1881-204		ы	<b>├</b>	0001	0000	s		BUSHING			
13002 1881B53	/	*	<del></del>	0001	0000	s		BUSHING			
13002 1881B52	/	4	┼-	1000	0000	S	-	BUSHING			
13002 1881B352	/	A.	+	0001	0000	S		BUSHING			
98747 00-ALC/LGMPM		-	ŏ	0004	0000	s	Ī	ENGR DATA REQMIS ATTACH "A"	СН "А"		
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STANDARD ENGINEERING TEXT	RING TEXT	-	-								
ENGINEERING DATA LIST REMARKS	LIST REMARKS							FURNISHED C - CLASS S - FURNI	FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION.	III .	- °
								1	STABLE BASE DRAWING REQUIRED; FIRNISHED WITH CONTRACT AWARD.	V - VENDOR DRAWING; (NOT PROVIDED).	A - DATA NOT AVAILABLE.

REV:	ENGINEERING DATA JUIREMENTS (ATTACHMENT "A")						
NOTE: MILITARY SPECIFICATION  1. THE FOLLOWING INSTRUCT	ONS I/STANDARDS WILL NOT BE FURNISHED IN TH IONS ARE FURNISHED FOR THE MANUFACTURE O	IE BID SET. F					
Piston Assembly, MLG,							
2. PART NUMBER		3. NATIONAL STOCK NUMBER					
1881B4		1620 01 167 0942					
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU	OF THE DATA INDICATED. THE SUPERSED	ED DATA WILL NOT BE				
5. OO-ALC/LILE System	m Engineering retains all rights to review major, from the Engineering Drawing Page 1						
and standards called out a responsible to completely	d, the contractor will certify to the govern and required for the manufacture of this co search these manuals, specifications, and components. Any questions can be forward	ontracted landing gear component/as standards and fully understand the	sembly. Contractor is requirements necessary to				
	the successful bidder shall provide a copy LILE for final review before production		outing documents and				
8. Identification and Marking per MIL-STD-130, Impression Stamping Not Permitted, in lieu of CPC 9201.							
indicated. If the drawing items shall be accomplish contract, followed by a d A contractor who receive prior contract. If a contract.	e vibropeened (with a vibrating pneumatic does not indicate a location, OO-ALC/Li and as follows: the serialization shall beging ash and the 2 digit year of manufacture, for as numerous intermittent contracts shall state act produces more than 999 items, the ser this: "S/N 98747-00-001".	ILE shall provide S/N location instr n with the CAGE (FSCM) of the co ollowed by a dash and a sequentially art serialization of items with the ne	outions. Serialization of intractor named on the unique 3 digit number. at number in sequence of the				
10. Material: 300 M St	eel per SAE AMS-S-6419 in lieu of MIL-:	S-8844, Class 3. (DWG 1881B4-50	))				
	Nickel Bronze per SAE AMS 4640 or SAE respectively. (DWGs 1881-204, 1881B:		of AMS 4640 and				
Material (	Material Cleanliness per SAE AMS 2300 in lieu of AMS 2300.						
11. Reference notes 14/16 on Enineering notice H-1 for Drawing 1881B4. (Preferred Method) Cadmium Titanium Plate as noted per MIL-STD-1500, Type II, in lieu of CPC 8225, Type II. (Alternate Option) LHE Cadmium Plate per MIL-STD-870, Type II, Class 1, in lieu of CPC 8206.							
12. Chromium Plate as noted per MIL-STD-1501, Type I or II, Class 3, in lieu of QQ-C-320, Class 2, and CPC 8207, SCN-22.							
13. Phosphate Coat as n	oted per MIL-DTL-16232 in lieu of CPC	8218 after Chrome and Cadmium P	late.				
	poxy Waterborne Primer per MIL-PRF-8: er MIL-PRF-23377, Type I, in lieu of MII		primer, one coat				
Apply two top coats FED-STD-595.	Polyurethane per MIL-PRF-85285, Type	I, in lieu of MIL-C-83286, Color #	17925 (White) per				
			0.75				
PREPARED BY  Dave Dodd		SYMBOL LGMPM	8 Mar 02				
Dave Doud		DOMI IVI	1 4				

REV:	ENGINEERING DATA REQ (ATT	UIREN CONTINUATION SHEET "ACHMED ("A")						
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
PART NUMBER	NATION	IAL STOCK NUMBER						
1881B4	1620 0	01 167 0942						
(FWDC), wet continuous of DEFECTS ALLOWED. level and there shall be not	method, fluorescent type. This inspection shall he the intent of NO DEFECTS ALLOWED is that	in lieu of CPC 9108. Use full wave direct current have the following acceptance/rejection criteria: NO at the inspection is conducted at the required sensitivity the inspection will be certified to the Level II with the						
16. Perform FLORESCENT PENETRANT INSPECTION per ASTM E 1417, Type I, Method B or C, Level 3 or 4 in lieu of MIL-I-6866 with the following acceptance/rejection criteria: NO DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWED is that the inspection is conducted at the required sensitivity level and there shall be no indications allowed. The inspector performing the inspection will be certified to the Level II with the inspection procedure developed by a Level III as specified in NAS-410.								
17. Ultrasonic Inspection per MIL-STD-2154 in lieu of MIL-I-8950.								
18. Heat Treat and Normalize as noted on drawings per SAE AMS-H-6875 in lieu of CPC 6216.								
19. On parts heat treated 180 KSI and above, any surface ground/machined after heat treat will be Nital Etch inspected for burns per MIL-STD-867 in lieu of CPC 9106. Grinding will be per MIL-STD-866 in lieu of CPC 6505.								
20. Corrosion Control th	20. Corrosion Control the entire part per MIL-C-16173, Grade 3, in lieu of CPC Spec 8405.							
21. For Hole Preparation, drilling, reaming, and honing, use Best Aircraft Industry Shop Fractices in lieu of CPC 6506.								
22. Shot Peen as noted per SAE AMS-S-13165 in lieu of MIL-S-13165.								
23. The following are not required to manufacture: Interchangeable per MIL-I-8500, CPC Spec Control Drawing 1881A8000, R.I. Design Spec L287C2001 and 2036.								
24. FORGING REQUIREMENTS:								
A. The required forging will be procured from the qualified forging source using the original certified forging procedures and dies/tooling.								
1. Prior to contract award the detailed part bidder will provide certification, from the forging source, to the government that the certified dies and forging procedures are available and the forging source has an agreement with the detail part bidder to provide forgings for their use in the event they are the successful bidder.								
SAE AMS-F-719	uction, forging lot qualification will be accompli- 90 (Steel) in lieu of MIL-F-7190. The contractor see and will submit certified documentation of acc	or will assure that this is or has been accomplished by						
PREPARED BY	SYMBO	DL DATE						

LGMPM

8 Mar 02

Dave Dodd

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REV:	ENGINEERING DATA REQUIREM⊾S CONTINUATION SHEET  (ATTACHMENT "A")						
PART NUMBER		NATIONAL STOCK NUMBE	NATIONAL STOCK NUMBER				
1881B4	•	1620 01 167 0942	1620 01 167 0942				
B. FORGING SOURCE, CONTROL AND LOCATION OF DIES:							
Forging drawing:     Die number:			1881B4-50 Unknown				
2. Control of forging processes: Pho		Phone #(216) 429-4112	BF Goodrich (13002) 8000 Marble Ave. Cleveland, OH 44105				
3. Location of forging dies: Pho		Phone#(216) 431-2900	Park Drop Forge 777 E 79th ST Cleveland, OH 44103				
23. Install Bushings per the following in lieu of CPC 7303:							
A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the l.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.  B. Prior to bushing installation, the part and housing bore shall be cleaned with a cleaning solvent to remove all contamination.  C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILEC Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.  D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.  E. In addition to sub-zero cooling of the bushing, it may be occasionally necessary to heat the housing into which the bushing is to be installed Detailed parts in the process, which do not have paint or sealart or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. The temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation, or corrosion shall be permitted.  F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushing.							
PREPARED BY		SYMBOL		DATE			
Dave Dodd		LGMPM		8 Mar 02			

REV:	ENGINEERING DA	TA REQUIREM CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
1881B4	,	1620 01 167 0942	
or lug under flange. S flange when bushing is	ges shall be installed in a similar manner as installed. Wipe off any excess sealant a her end of bushing also.	as to ensure complete coverage of in	nside face of bushing
	external grease grooves, the inside of the lug will be coated with MIL-PRF-81733		73 prior to bushing
PREPARED BY		SYMBOL	DATE
Dave Dodd		LGMPM	8 Mar 02

PAGE 4

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-167-0942 NOUN: Piston Assembly PART NUMBER (P/N)1881B4 AIRCRAFT:B-1B

#### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>1881B4</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-167-0942</u> NOUN: Piston Assembly PART NUMBER (P/N)1881B4 AIRCRAFT:B-1B

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$5000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	1: 05						EN	ENGINEERING DATA LIST	LIST	*	* HISTORY *
DATE:	E: 18APR03	DATA TECH:	SDD		ORGN SYMBOL:	SYMB	OT :	<sup>  </sup>	LGMPM PR NR:	*	APPLICATION: B-52	PAGE 1 OF 1
CAGE: 81205		MANUFACTURER NAME: BOEING CO.		1			S R	REFERENCE 5-71661-503	REFERENCE NR: 5-71661-503	NOUN: PISTON, LANDINGGEAR	IDINGGEAR	NSN: 1620007718827
CAGE		DRAWING NUMBER	RI	REV SH	NR NR FURN DIST SHEETS CARDS CODE CODE	NR	FURN I	CODE	NOUN		REQUIREMENTS	
9874	98747 00-ALC/LGMPM			-	0003	0000	ß	Щ	ENGR DATA REQMTS ATTACHMENT "A"			
8120	81205 3-80059		\	o v	1000	0000	S	4	AXLE			
8120	81205 4-80076			o ن	0001	0000	S	S	SHEAR PLUG			
8120	81205 5-36426		\	<u>ы</u>	1000	0000	S	H	INNER CYLINDER FORGING			
8120	81205 5-71661			۵	1000	0000	S	10	CYLINDER ASSEMBLY-INNER			
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STA	STANDARD ENGINEERING TEXT	RING TEXT										
Ä	ENGINEERING DATA LIST REMARKS	LIST REMARKS							FURNISHED METHOD CODE LEGEND:  C - CLASSIFIED DOCUMENT.  S - FURNISHED WITH SOLICITATION.  M - STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD	X R ON. P RED; V WARD.	- DATA SUPPLIED (NOT IN EDCARS) FURNISHED BY PCD UPON REQUEST PARTIAL DOCUMENT FURNISHED VENDOR DRAWING; (NOT PROVIDED).	G - GOV'T DOCUMENT. O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT AVAILABLE.

REV: ENGINI	ERING DATA REQUIREMENTS			
	(ATTACHMENT "A")			
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN  1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE				
Cylinder Assembly-Inner, Tip Protection Gear, B-52 ACFT				
2. PART NUMBER	3. NATIONAL STOCK NUMBER			
5-71661-503	1620 00 771 8827			
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIE FURNISHED UNLESS SO INDICATED.	U OF THE DATA INDICATED. THE SUPERSEI	DED DATA WILL NOT BE		
5. OO-ALC/LGHLEN System Engineering retains all rights to r items. All deviations, minor or major, from the Engineering Dra				
6. Prior to contract award, the contractor will certify to the gove and standards called out and required for the manufacture of this responsible to completely search these manuals, specifications, armanufacture landing gear components. Any questions can be for	contracted landing gear component/and standards and fully understand the	assembly. Contractor is requirements necessary to		
7. After contract award the successful bidder shall provide a cop process specifications) to LGHLEN for final review before process.		outing documents and		
8. Identification and Marking per MIL-STD-130, impression stamping not permitted, in lieu of BAC 5307.				
9. Drawing 2-5000, BACD 2041, BAC 5602, BAC 5004, and MIL-H-6088 are not required to manufacture this item.				
10. Threads per MIL-S-7742, Safety Critical.				
11. Perform MAGNETIC PARTICLE INSPECTION per ASTM (FWDC), wet continuous method, fluorescent type. This inspect DEFECTS ALLOWED. The intent of NO DEFECTS ALLOWE level and there shall be no indications allowed. The inspector per inspection procedure developed by a Level III as specified in NA.	ion shall have the following acceptang is that the inspection is conducted forming the inspection will be certification.	ce/rejection criteria: NO l at the required sensitivity		
12. Heat Treat per SAE AMS-H-6875 in lieu of BAC 5601.				
13. On parts heat treated 180 KSI and above, any surfaces ground/machined after heat treat will be inspected for burns per MIL-STD-867. Grinding will be per MIL-STD-866.				
14. The following finish codes apply to the manufacture of this item:				
A. F 1.10 Apply no finish except that temporary coatings may be applied as required for protection during handling, transportation, and storage.				
B. F 1.20 Cadmium Plate per MIL-STD-870, Class 1, Type II. Option F 1.205 not allowed.				
C. F 1.60 Cadmium Plate per MIL-STD-870, Class 1, Type MIL-PRF-23377 to Interior Surfaces excluding the Axle Hole.	*	'olyamide per		
D. F1.61 Cadmium Plate per MIL-STD-870, Type III, Class noted. Apply two primer coats epoxy-polymide per MIL-PRF		ckness .003"005" except as		
PREPARED BY	SYMBOL	DATE		
Dave Dodd	LGMPM	17 Apr 03		

REV:		ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
5-71661-503	•	1620 00 771 8827
15. Apply one co		1757 on faying surfaces.  er MIL-PRF-23377, followed with two top coats polyurethane per e) per FED-STD-595 to the exterior surfaces of P/N 5-36426-2 excluding the Axle
Hole.		

- 18. Use SAE AMS 6280 for 8630 Steel in lieu of MIL-S-6050. (DWG 4-80076)
- 19. Machine using Best Aircraft Industry Shop Practices in lieu of BACD 2097.
- 20. DRILLING, REAMING, and HONING to meet drawing specifications, using best shop procedures and the following notes:
  - A. High speed steel (HSS) drills shall be used to drill corrosion resistant steel.
  - B. HSS reamers will be used for rough reaming, and final reaming of steels heat treated below 200 KSI. Carbide or premium grade hi-speed steel tipped reamers will be used for rough reaming of steels heat treated above 200 KSI.
  - C. Honing stones shall be of 150 to 500 aluminum oxide grit with a medium-hard bond and preferably a multi-head stone. Heads with steel shoes or wipers shall not be used.
  - D. Drilling shall never be used as a final machining operation. A minimum of 0.015 inch on diameter shall be left for final reaming. Holes shall be finished by reaming or boring. When jigs, fixtures, or bushings are not used for drilling holes larger than 1/4 inch, the holes will be piloted with a center drill. Chemical, electrical, or electrochemical hole producing methods shall not be used as a final surface producing method without prior approval from OO-ALC/LGHLEN.
  - E. Rough reaming, the reamer length shall be as short as consistent with required penetration. Final reaming, the diametral cut shall produce a hole that meets the requirements of the engineering drawing.
  - F. Honing shall be used as a final operation where a surface finish better than 125 roughness height ratio is required and cannot be produced by other means.
  - G. Carbide drills can be operated at higher speeds than HSS drills, but must be used with caution. They must not be used in a dull or chipped condition.

PREPARED BY	SYMBOL	DATE
Dave Dodd	LGMPM	17 Apr 03

REV:	ENGINEERING DA	TA REQUIREMEN S CONT (ATTACHMENT "A")	NUATION SHEET
PART NUMBER	L	NATIONAL STOCK NUMBER	
5-71661-503	1	1620 00 771 8827	
21. FORGING REQUIR	EMENTS:		
A. The required forging and dies/tooling.	ng will be procured from the qualified fo	rging source using the ori	ginal certified forging procedures
that the certified die	award the detailed part bidder will provi as and forging procedures are available are argings for their use in the event they are	nd the forging source has	forging source, to the government an agreement with the detail part
SAE AMS-F-7190 (	ion, forging lot qualification will be accordately. The contractor will assure that the umentation of accomplishment to the government.	is is or has been accompl	the forging drawing and lished by the forging source and will
B. FORGING SOUR	CE, CONTROL AND LOCATION OF I	DIES:	
Forging drawing     Die number:	<b>;</b> :	Boeir Unkn	ng Aircraft Co. 5-36426-2 nown
2. Control of forging	ng processes:	Unkr	nown
3. Location of forg	ing dies:	Unkr	nown
C. INSTRUCTIONS	FOR QUALIFICATION OF NEW FOR	GING SOURCE:	
dies and the propose the government pro The contractor will	award, the contractor will advise the govern forging source. The contractor will no curing agency. The government will have inform the forging house in writing, at the imited use rights of the dies and forward	ot proceed to obtain new of e unlimited use of the die e same time the order for	ties without the express consent of s developed under this contract. the dies is placed, that the
22. Use NSN: 5310 01	073 8613, PN: AN365-428, CAGE: 8	8044, Self Locking Nut i	n lieu of BAC-N10BY-54W.
PREPARED BY		SYMBOL	DATE
Dave Dodd		LGMPM	17 Apr 03

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-771-8827</u> NOUN: <u>Inner Cyl Assy-TIP</u> PART NUMBER (P/N)<u>5-71661-503</u> AIRCRAFT:B-52

#### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>5-71661-503</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis
  - (b) Heat treat
  - (c) Grinding
  - (d) Plating

- (e) Finish
- (f) Grain flow
- (g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-771-8827</u> NOUN: <u>Inner Cyl Assy-TIP</u> PART NUMBER (P/N)<u>5-71661-503</u> AIRCRAFT:B-52

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$4500.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- Maximum time for approval of qualification by similarity will not exceed 15 days.

L		REVISION: 09	60						日	ENGINEERING DATA LIST	DATA	LIST		* HISTORY *
ΠĦ	DATE	3 : 12JUN03	DATA TECH:	SCH		ORGN SYMBOL:	SYMB	10L:	I I	LGMPM	PR NR :		APPLICATION: B-52	PAGE 1 OF 1
<u>10 ~</u>	CAGE: 81205	BOEING CO.	URER NAME:		]			-	REFEREN 25-4204-5	REFERENCE NR: 25-4204-5		NOUN: PISTON,LA	NOUN : PISTON,LANDING GEAR	NSN : 1620013153296
<u> </u>	CAGE	DRAWING NUMBER	NUMBER	- <del></del>	REV S	NR NR FURN DIST SHEETS CARDS CODE CODE	NR	FURN	DIST	NOUN			REQUIREMENTS	
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		/76A739			-						ĕ	೦೦೩		
S	TAN	STANDARD ENGINEERING TEXT	ING TEXT											

ENGINEERING DATA LIST REMARKS

G - GOV'T DOCUMENT.

I REQUEST. IISHED.

O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT AVAILABLE.

REV:	ENGINEERING DATA AEMENTS (ATTACHMENT A")
NOTE: MILITARY SPECIFICATIONS	USTANDARDS WILL NOT BE FURNISHED IN THE BID SET.
1. THE FOLLOWING INSTRUCTION:	S ARE FURNISHED FOR THE MANUFACTURE OF
CYLINDER - I	NNER, MLG, B-52
2. PART NUMBER	3. NATIONAL STOCK NUMBER
25-4204-5	1620-01-315-3296
4. THE FOLLOWING SPECIFICATION	NSISTANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.
5. OO-ALC/LGHLE	EN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT/REJECT MRB'S

- 5. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT/REJECT MRB'S PRIOR TO SHIPMENT OF DISCREPANT ITEMS. ALL DEVIATIONS, MINOR OR MAJOR, FROM THE ENGINEERING DRAWING PACKAGE WILL BE SUBMITTED FOR MRB DISPOSITION.
- 6. PRIOR TO CONTRACT AWARD, THE CONTRACTOR WILL CERTIFY TO THE GOVERNMENT IN WRITING, FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO THIS OFFICE OO-ALC/LGHLEN.
- 7. AFTER CONTRACT AWARD THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LIGHLEN FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.
- 8. IDENTIFICATION AND MARKING PER MIL-STD-130, IMPRESSION STAMPING NOT PERMITTED, IN LIEU OF BAC 5601.
- 9. SERIAL NUMBER SHALL BE VIBROPEENED (WITH VIBRATING PNEUMATIC PENCIL), IN 0.09" LETTERS 0.004" 0.007" DEEP IN THE LOCATION INDICATED. IF THE DRAWING DOES NOT INDICATE A LOCATION, OO-ALC/LGHLEN SHALL PROVIDE S/N LOCATION INSTRUCTIONS. SERIALIZATION OF ITEM SHALL BE ACCOMPLISHED AS FOLLOWS: THE SERIALIZATION SHALL BEGIN WITH THE CAGE OF THE CONTRACTOR NAMED ON THE CONTRACT, FOLLOWED BY A DASH AND THE 2 DIGIT YEAR OF MANUFACTURE, FOLLOWED BY A DASH AND A SEQUENTIALLY UNIQUE 3 DIGIT NUMBER. A CONTRACTOR WHO RECEIVES NUMEROUS INTERMITTENT CONTRACTS SHALL START SERIALIZATION OF ITEM WITH THE NEXT NUMBER IN SEQUENCE OF THE PRIOR CONTRACT. IF A CONTRACT PRODUCES MORE THAN 999 ITEMS, THE SERIAL NUMBER SHOULD BEGIN USING 4 DIGIT SERIAL NUMBERS. THE SERIAL NUMBER SHOULD APPEAR LIKE THIS: "S/N 98747-03-001".

#### 10. MATERIAL:

4330 STEEL PER SAE AMS 6427 IN LIEU OF MIL-S-8699. OPTIONAL, SAE AMS 6407 IN LIEU OF AMS 6407. (DWG 25-4215)

4340 STEEL PER SAE AMS 6415 OR SAE AMS 6484 IN LIEU OF MIL-S-5000. OPTIONAL, 4130 STEEL PER SAE AMS-S-6758 IN LIEU OF MIL-S-6758 OR 8630 STEEL PER SAE AMS 6280 IN LIEU OF MIL-S-6050. (DWG 6-71444)

- 11. HEAT TREAT/DECARBURIZATION AND PROCESS AS NOTED PER SAE AMS-H-6875 IN LIEU OF BAC 5601.
- 12. ON PARTS HEAT TREATED 180 KSI AND ABOVE, ANY SURFACE GROUND/MACHINED AFTER HEAT TREAT WILL BE NITAL ETCH INSPECTED FOR BURNS PER MIL-STD-867. GRINDING WILL BE PER MIL-STD-866.

13. SHOT PEEN TO DWG REQUIREMENTS PER SAE AMS-	S-13165 IN LIEU OF BAC 5730 A	ND A.F. DWG 62A31577.
PREPARED BY	SYMBOL	DATE
CAROL HYER	LGMPM	4 Jun 03

REV:	ENGINEERING	ATTACHME. INVATION SHEET (ATTACHME).	
PART NUMBER		NATIONAL STOCK NUMBER	
25-4204-5	2	1620-01-315-3296	
FULL WAVE DIRECT ( FOLLOWING ACCEPTA ALLOWED IS THAT TH SHALL BE NO INDICA	ETIC PARTICLE INSPECTION PER ASCURRENT (FWDC), WET CONTINUO ANCE/REJECTION CRITERIA: NO D HE INSPECTION IS CONDUCTED AT TIONS ALLOWED. THE INSPECTOR E INSPECTION PROCEDURE DEVEL	OUS METHOD, FLUORESCENT DEFECTS ALLOWED. THE INT THE REQUIRED SENSITIVITY R PERFORMING THE INSPECTI	TYPE WITH THE ENT OF NO DEFECTS LEVEL AND THERE ON SHALL BE CERTIFIED
15. MACHINE, USING BAC 5440.	BEST AIRCRAFT INDUSTRY SHOP	PRACTICES, TO DRAWING RE	QUIREMENTS IN LIEU OF
16. FOR FINISH HARD	CHROME PLATE (NOTE 14) USE M	IIL-STD-1501, TYPE II, CLASS 3	, in lieu of BAC 5709.
17. FOR FINISH F-1.10 STORAGE.	), APPLY NO COATINGS, EXCEPT A	S REQUIRED FOR HANDLING,	TRANSPORTATION AND
18. FOR FINISH F-1.20	), CADMIUM PLATE PER SAE AMS-(	QQ-P-416, TYPE II, CLASS 1.	
FOLLOW WITH TWO (	., (NOTE 2) CADMIUM PLATE PER M 2) COATS OF EPOXY WATERBORNI TWO (2) COATS OF EPOXY-POLYA	E PRIMER PER MIL-PRF-85582,	TYPE I, CLASS 2.
	SHALL BE PROCURED FROM THE OPROCEDURES AND DIES/TOOLING.		USING THE ORIGINAL
THE FORGING SOURC AVAILABLE AND THE	TRACT AWARD, THE DETAILED PA E, TO THE GOVERNMENT THAT TH FORGING SOURCE HAS AN AGREE USE IN THE EVENT THEY ARE TH	HE CERTIFIED DIES AND PROC EMENT WITH THE DETAIL PAI	CEDURES ARE
THE FORGING DRAWI FORGINGS. THE DET.	DUCTION, FORGING LOT QUALIFIC ING AND SAE AMS-F-7190 FOR STEI AILED PART CONTRACTOR SHALL E AND SHALL SUBMIT CERTIFIED	EL FORGINGS AND SAE AMS-A ASSURE THAT THIS HAS BEE	A-22771 FOR ALUMINUM N ACCOMPLISHED BY
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	4 Jun 03
00-ALC FORM 462, OCT 96 <i>(EF-V1)</i>	(PerFORM PRO)	4	PAGE0F

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REV:	ENGINEERING	DATA REQUIREME' (ATTACHME). "	/INUATION SHEET		
PART NUMBER		NATIONAL STOCK NUMBER	<del> </del>		
25-4204-5		1620-01-315-32	296		
	E, CONTROL OF FORGING DIES AND	THE LOCATION	<b>V</b> :		
A. FORGING DRAV					
B. CONTROL OF F	ORGING PROCESS: HONEYWELL II	NTERNATIONAL	, INC (55284 CA	.GE)	
C. LOCATION OF	FORGING: LADISH COMPANY 5481 SOUTH PACKARD A' CUDAHY, WI 53110-2244 PHONE: (414) 747-2760 POC: JOE WILFERT	VE			
D. DIE NUMBER:	BX076				
INTENT TO PROCURE NOT PROCEED TO OB GOVERNMENT PROCU DEVELOPED UNDER T AT THE SAME TIME O	ACT AWARD, THE CONTRACTOR SINEW FORGING DIES AND THE PROTAIN NEW FORGING DIES WITHOUT THE GOVERNME THIS CONTRACTORY THE ORDER FOR THE DIES IS PLACED AND FORWARD A COPY OF THIS LI	POSED FORGING T THE EXPRESS NT SHALL HAVI OR SHALL INFOR ACED, THAT THI	G SOURCE. TH WRITTEN CON E UNLIMITED I IM THE FORGI E GOVERNMEN	E CONTRACTOR SHALL ISENT OF THE USE OF THE DIES NG HOUSE IN WRITING, IT HAS UNLIMITED USE	
23. INSTALL BUSHINGS PER THE FOLLOWING:					
A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.					
B. PRIOR TO BUSHING INSTALLATION, THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.					
C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LGHLEN ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.					
COOLANT WITH AN A	SHALL BE INSTALLED INTO THE HOABSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH	E. TRIAL RUNS	SHALL BE ACC	COMPLISHED AS	
PREPARED BY		SYMBOL	·	DATE	
CAROL HYER		LGMPM		4 Jun 03	
OO-ALC FORM 462, OCT 96 (EF-V)	I (PerFORM PRO)		<u> </u>	PAGEOF	

REV:	ENGINEERING	DATA REQUIREMEN* INVATION SHEET (ATTACHMEN. /	
PART NUMBER		NATIONAL STOCK NUMBER	
25-4204-5	•	1620-01-315-3296	
INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE U ETC.; TO THE MAXIM MONITOR HEAT AND TEMPERATURE. NO S	IONALLY BE NECESSARY TO HEAT FION TO SUB-ZERO COOLING OF TH LANT OR OTHER ORGANIC MATERI ISE OF RADIANT HEAT TECHNIQUE TUM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF SCALING, OXIDATION, OR CORROSI	IE BUSHING. DETAIL PARTS AL APPLIED PRIOR TO HEAT IS, SUCH AS THERMAL BLAN IPERATURE MEASURING DEV THE PART EXPECTED TO RE ION SHALL BE PERMITTED.	IN PROCESS WILL NOT ING, THE PARTS SHALL KETS, INFRARED LAMPS VICES SHALL BE USED TO EACH MAXIMUM
LIGHT COAT OF SEAL	HOUT FLANGES SHALL BE INSTALI LANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PI	SHRUNKEN BUSHING AND V	VIPE OFF ANY EXCESS
SEALANT SHALL ALS A MANNER AS TO EN INSTALLED. WIPE OF	TH FLANGES SHALL BE INSTALLED TO BE APPLIED TO FACE OF LUG UN SURE COMPLETE COVERAGE OF IN FF ANY EXCESS SEALANT AROUND OM OTHER END OF BUSHING ALSO	NDER FLANGE. SEALANT SH ISIDE FACE OF BUSHING FLA PERIPHERY OF BUSHING FL	ALL BE APPLIED IN SUCH NGE WHEN BUSHING IS
MIL-C-16173 PRIOR TO	S WITH EXTERNAL GREASE GROOV D BUSHING INSTALLATION AND FA F BUSHING IS FLANGED.	ES THE INSIDE OF THE LUG V CE OF LUG WILL BE COATEI	WILL BE COATED WITH WITH MIL-PRF-81733
	02, BAC 5504, BAC 5006, BAC 5009, I E NOT REQUIRED TO MANUFACTU		DRAWING 2-5000, AND
25. DISREGARD ALL	NOTES ON DRAWING 35-23189 THA	T DO NOT AFFECT THE MAC	HINING OF THE PART.
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	4 Jun 03
00-ALC FORM 462, OCT 96 (EF-V)	1) (PerFORM PRO)		PAGE OF

(PL98-525, SECTION 2319)

STOCK NR (NSN): <u>1620-01-315-3296</u>
NOUN: <u>PISTON, LANDING GEAR</u>

PART NUMBER (P/N): <u>25-4204-5</u>
AIRCRAFT: <u>B-52</u>

#### SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N \_25-4204-5 and specification SAE AMS-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN): <u>,1620-01-315-3296</u>

NOUN: <u>PISTON, LANDING GEAR</u>

PART NUMBER (P/N): <u>25-4204-5</u>

AIRCRAFT: <u>B-52</u>

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$3000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	03						ENGINEERING DATA	LIST	* HISTORY *
DATE	18APR03	DATA TECH:	SDD	<u>8</u>	GN SY	ORGN SYMBOL		LGMPM PR NR :	APPLICATION: B-52	PAGE 1 OF 1
CAGE: 81205	E: MANUFACTÜRER NAME 05 BOEING CO.	JRER NAME:					S-710	REFERENCE NR: 5-71661-504	NOUN : PISTON,LANDING GEAR	NSN: 1620007718830
CAGE	DRAWING NUMBER	NUMBER	REV	, SHEE	R N ETS CA	R FU	NR NR FURN DIST SHEETS CARDS CODE CODE	T NOUN	REQUIREMENTS	
9874	98747 00-ALC/LGMPM			0003	03 00	s 0000	ß	ENGR DATA REQMIS ATTACHMENT "A"		
8120	81205 3-80059		υ	0001		s 0000	S	AXLE		
8120	81205 4-80076		Ü	0001	$\overline{}$	s 0000	ω	SHEAR PLUG		
8120	81205 5-36426		ы	0001		S 0000	S	INNER CYLINDER FORGING		
8120	81205 5-71661		Δ .	0001	$\overline{}$	8 0000	ဟ	CYLINDER ASSEMBLY-INNER	and the second s	
	/8-C-3		_				ļ	)d	DCN	
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			_	<u> </u>	_					
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STA	STANDARD ENGINEERING TEXT	ING TEXT								
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ENC	ENGINEERING DATA LIST REMARKS	IST REMARKS						FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION.	GEND: X - R - ITATION. P -	- o
								M - STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD	REQUIRED; ACT AWARD.	A - DATA NOT AVAILABLE.

DEV.					
REV:	ENGINE	ERING DATA REQUIREMENTS (ATTACHMENT "A")			
	DNS I/STANDARDS WILL NOT BE FURNISHED IN T				
	ions are furnished for the manufacture of the protection Gear, B-52 ACFT	OF			
2. PART NUMBER		3. NATIONAL STOCK NUMBER			
5-71661-504		1620 00 771 8830			
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU ATED.	J OF THE DATA INDICATED. THE SUPERSE	DED DATA WILL NOT BE		
	ystem Engineering retains all rights to re nor or major, from the Engineering Draw				
and standards called out a responsible to completely	d, the contractor will certify to the gover nd required for the manufacture of this c search these manuals, specifications, and components. Any questions can be forw	contracted landing gear component/a d standards and fully understand the	assembly. Contractor is e requirements necessary to		
	he successful bidder shall provide a copy LGHLEN for final review before produ		outing documents and		
8. Identification and Mar	king per MIL-STD-130, impression stan	nping not permitted, in lieu of BAC	5307.		
9. Drawing 2-5000, BAC	CD 2041, BAC 5602, BAC 5004 and MI	IL-H-6088 are not required to manu	facture this item.		
10. Threads per MIL-S-7	742, Safety Critical.				
(FWDC), wet continuous in DEFECTS ALLOWED. level and there shall be not	C PARTICLE INSPECTION per ASTM method, fluorescent type. This inspection. The intent of NO DEFECTS ALLOWED indications allowed. The inspector perfectoped by a Level III as specified in NAS	on shall have the following acceptance D is that the inspection is conducted forming the inspection will be certification.	ce/rejection criteria: NO lat the required sensitivity		
12. Heat Treat per SAE	AMS-H-6875 in lieu of BAC 5601.				
<u>-</u>	180 KSI and above, any surfaces ground will be per MIL-STD-866.	/machined after heat treat will be in	spected for burns per		
14. The following finish	codes apply to the manufacture of this ite	em:			
A. F 1.10 Apply no finish except that temporary coatings may be applied as required for protection during handling, transportation, and storage.					
B. F 1.20 Cadmium Plate per MIL-STD-870, Class 1, Type II. Option F 1.205 not allowed.					
	Plate per MIL-STD-870, Class 1, Type erior Surfaces excluding the Axle Hole.		olyamide per		
	Plate per MIL-STD-870 Type III, Class 2 imer coats of epoxy-polymide per MIL-P	_	5" except as noted. Exterior		
PREPARED BY		SYMBOL	DATE		
Dave Dodd		LGMPM	17 Apr 03		

REV:	ENGINEERING DA	TA REQUIREMES CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
5-71661-504	•	1620 00 771 8830

- E. F 1.90 Chromium Plate to drawing specified thickness to meet the requirements of QQ-C-320, Class 2.
- F. F 12.46 Assemble with wet primer TT-P-1757 on faying surfaces only.
- 15. Apply one coat Epoxy-Polyamide primer per MIL-PRF-23377, followed with two top coats polyurethane per MIL-PRF-85285, Type 1, color # 17925 (White) per FED-STD-595 to the exterior surfaces of P/N 5-36426-2 excluding the Axle Hole.
- 16. Use SAE AMS 6484 for 4340 Steel in lieu of MIL-S-5000. (DWG 5-36426 & 3-80059)
- 17. Use SAE AMS 6382 for 4140 Steel in lieu of MIL-S-5626. (DWG 4-80076 & 3-80059)
- 18. Use SAE AMS 6280 for 8630 Steel in lieu of MIL-S-6050. (DWG 4-80076)
- 19. Machine using Best Aircraft Industry Shop Practices in lieu of BACD 2097.
- 20. DRILLING, REAMING, and HONING to meet drawing specifications, using best shop procedures and the following notes:
  - A. High speed steel (HSS) drills shall be used to drill corrosion resistant steel.
  - B. HSS reamers will be used for rough reaming, and final reaming of steels heat treated below 200 KSI. Carbide or premium grade hi-speed steel tipped reamers will be used for rough reaming of steels heat treated above 200 KSI.
  - C. Honing stones shall be of 150 to 500 aluminum oxide grit with a medium-hard bond and preferably a multi-head stone. Heads with steel shoes or wipers shall not be used.
  - D. Drilling shall never be used as a final machining operation. A minimum of 0.015 inch on diameter shall be left for final reaming. Holes shall be finished by reaming or boring. When jigs, fixtures, or bushings are not used for drilling holes larger than 1/4 inch, the holes will be piloted with a center drill. Chemical, electrical, or electrochemical hole producing methods shall not be used as a final surface producing method without prior approval from OO-ALC/LGHLEN.
  - E. Rough reaming, the reamer length shall be as short as consistent with required penetration. Final reaming, the diametral cut shall produce a hole that meets the requirements of the engineering drawing.
  - F. Honing shall be used as a final operation where a surface finish better than 125 roughness height ratio is required and cannot be produced by other means.
  - G. Carbide drills can be operated at higher speeds than HSS drills, but must be used with caution. They must not be used in a dull or chipped condition.

PREPARED BY	SYMBOL	DATE
Dave Dodd	LGMPM	17 Apr 03
OO-ALC FORM 462, OCT 96 (EF-V1) (PerFORM PRO)		PAGE 2 OF 3

REV:	ENGINEERING DA	TA REQUIREMES		SHEET
PART NUMBER		NATIONAL STOCK NU	MBER	
5-71661-504	,	1620 00 771 8830		
21. FORGING REQUIR	REMENTS:			
A. The required forgi and dies/tooling.	ng will be procured from the qualified for	rging source using (	the original certi	fied forging procedures
that the certified die	t award the detailed part bidder will provi es and forging procedures are available an orgings for their use in the event they are	nd the forging sourc	e has an agreem	
SAE AMS-F-7190	ion, forging lot qualification will be according (Steel). The contractor will assure that the cumentation of accomplishment to the government.	is is or has been ac		
B. FORGING SOUR	CE, CONTROL AND LOCATION OF D	DIES:		
<ol> <li>Forging drawing Die number:</li> </ol>	g:		Boeing Aircraft Unknown	Co. 5-36426-2
2. Control of forging	ng processes:		Unknown	
3. Location of forg	ging dies:		Unknown	
C. INSTRUCTIONS	FOR QUALIFICATION OF NEW FOR	GING SOURCE:		
dies and the propose the government pro The contractor will	a award, the contractor will advise the government source. The contractor will no curing agency. The government will have inform the forging house in writing, at the imited use rights of the dies and forward	ot proceed to obtain e unlimited use of the e same time the ord	new dies withou he dies develope der for the dies is	at the express consent of ad under this contract.  It is placed, that the
22. Use NSN: 5310 01	073 8613, PN: AN365-428, CAGE: 8	8044, Self Locking	Nut in lieu of B	AC-N10BY-54W.
PREPARED BY		SYMBOL		DATE
Dave Dodd		LGMPM	:	17 Apr 03

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-771-8830</u> NOUN: <u>Inner Cyl Assy-TIP</u> PART NUMBER (P/N)<u>5-71661-504</u> AIRCRAFT:B-52

#### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>5-71661-504</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis
  - (b) Heat treat
  - (c) Grinding
  - (d) Plating

- (e) Finish
- (f) Grain flow
- (g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-771-8830

NOUN: Inner Cyl Assy-TIP

PART NUMBER (P/N)<u>5-71661-504</u> AIRCRAFT:B-52

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$4500.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	10					٣	ENGINEERING	ING DATA	TA LIST		*	* HISTORY *
DATE:	H	DATA TECH:	SDD	<u>p</u>	ORGN SYMBOL:	WBOL.		LGMPM	PR NR :		APPLICATION:	N: C-130	PAGE 1 OF 1
CAGE: 98897	MANUFACTURER NAME: LOCKHEED MARTIN	RER NAME: MARTIN		-			REF 388	REFERENCE NR: 388059-11		NOUN	NOUN : PISTON,LANDING GEAR	R	NSN : 1620008624057
CAGE	DRAWING NUMBER	NUMBER	REV	VSHE	NR FURN DIST SHEETS CARDS CODE CODE	R FU	DE CO		NOUN			REQUIREMENTS	
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98897	98897 3333895	,	В	0001		0000	s	PISTON-SHOCK	PISTON-SHOCK STRUT, MLG (FORGING	RGING			
98897	98897 LAC 0701	,	/ G3	<del> </del>	0000	0000	S	PROCESS SPECT	SPECIFICATION				
98747	98747 00-ALC/LGMPM	,		8	0003 00	0000	S	ENGR DATA REC	ENGR DATA REOMIS ATTACHMENT "A"	"A"			
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STAN	STANDARD ENGINEERING TEXT	NG TEXT											
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ENG	ENGINEERING DATA LIST REMARKS	IST REMARKS							FURNISHED METHOD CODE LEGEND: C - CLASSIPIED DOCUMENT. S - FURNISHED WITH SOLICITATI M - STABLE BASE DRAWING REQUI FURNISHED WITH CONTRACT A	IISHED METHOD CODE LEGEND: CLASSIPIED DOCUMENT. FURNISHED WITH SOLICITATION. STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD.		X - DATA SUPPLIED (NOT IN EDCARS). R - FURNISHED BY PCD UPON REQUEST. P - PARTIAL DOCUMENT FURNISHED. V - VENDOR DRAWING; (NOT PROVIDED).	. G - GOV'T DOCUMENT O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT AVAILABLE.

REV:	PALOISIE	DINC DATA COUDERSENTS			
	ENGINE	ERING DATA SEQUIREMENTS (ATTACHMENT "A")			
	ONS I/STANDARDS WILL NOT BE FURNISHED IN THE				
PISTON - SHOCK STRU		· 	:		
2. PART NUMBER		3. NATIONAL STOCK NUMBER			
388059-11		1620-00-862-4057			
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU ATED.	OF THE DATA INDICATED. THE SUPERSED	DED DATA WILL NOT BE		
REVIEW BOARD (MRB	EM ENGINEERING RETAINS ALL RIG D) DISPOSITIONS PRIOR TO SHIPMEN HE ENGINEERING DRAWING PACKA	IT OF DISCREPANT ITEM. ALL	DEVIATIONS, MINOR		
FULL COMPLIANCE W THE MANUFACTURE RESPONSIBLE TO COM UNDERSTAND THE RI	ACT AWARD, THE CONTRACTOR SHOUTH MANUALS, SPECIFICATIONS, A OF THIS CONTRACTED LANDING GOVERNMENTS SEARCH THESE MANUAL CORWARDED TO THE OFFICE OF OCCUPANTS	AND STANDARDS CALLED OU' EAR COMPONENT/ASSEMBLY. LS, SPECIFICATIONS, AND STA NUFACTURE LANDING GEAR O	T AND REQUIRED FOR CONTRACTOR IS NDARDS AND FULLY		
	AWARD, THE SUCCESSFUL BIDDE OUTING DOCUMENTS AND PROCES N BEGINS.				
8. IDENTIFY PER MIL	-STD-130 IN LIEU OF LAC 0227.				
-0.007" DEEP IN THE I OO-ALC/LILE SHALL I ACCOMPLISHED AS F CONTRACTOR NAME MANUFACTURE, FOL WHO RECEIVES NUM NEXT NUMBER IN SEC	HALL BE VIBROPEENED (WITH VIB LOCATION INDICATED. IF THE DRA PROVIDE S/N LOCATION INSTRUCT OLLOWS: THE SERIALIZATION SHA D ON THE CONTRACT, FOLLOWED LOWED BY A DASH AND A SEQUEN EROUS INTERMITTENT CONTRACT: QUENCE OF THE PRIOR CONTRACT SHOULD BEGIN USING 4 DIGIT SER S/N 98747-00-001.	WING DOES NOT INDICATED TONS. SERIALIZATION OF ITE LL BEGIN WITH THE CAGE (FS BY A DASH AND THE 2 DIGIT NUM S SHALL START SERIALIZATIO. IF A CONTRACT PRODUCES	A LOCATION, M SHALL BE SCM) OF THE YEAR OF BER. A CONTRACTOR N OF ITEM WITH THE MORE THAN 999 ITEMS,		
10. MATERIAL: 300M STEEL PER SAE AMS 6257 IN LIEU OF MIL-S-8844.					
11. CHROMIUM PLATE PER MIL-STD-1501, TYPE I OR II, CLASS 2, IN LIEU OF LAC 0496.					
12. TITANIUM CADMIUM PLATE AS NOTED PER MIL-STD-1500, CLASS 2, TYPE II IN LIEU OF STP 58-005.					
13. SHOT PEEN PER SAE AMS-S-13165, INTENSITY .008A012A, 200% COVERAGE.					
PREPARED BY		SYMBOL	DATE		
DENISE BISHOP		LGMPM	1 Nov 01		

REV:	ENGINEERING DA	TA REQUIREN GONTINUATION S (ATTACHMENT "A")	SHEET			
	· .	(ATTACHMENT A)				
PART NUMBER		NATIONAL STOCK NUMBER				
388059-11	•	1620-00-862-4057				
MIL-H-6875. FINISHEI AND LAC PROCESS SI GROUND/MACHINED	(-991) TO BE NORMALIZED AND TE D PART TO BE HEAT TREATED PER PEC 522. PARTS HEAT TREATED TO AFTER HEAT TREAT, SHALL BE IN INDING SHALL BE PER MIL-STD-86	SAE AMS-H-6875 IN LIEU OF ST 180 KSI AND ABOVE; ANY SU SPECTED FOR ABUSIVE GRIND	ГР 54-006, MIL-H-6875 RFACE			
15. FORGE AND INSPE	ECT PER MIL-F-7190 IN LIEU OF LAC	0562 AND LAC PROCESS SPEC	562.			
16. REMOVAL OF FOR	RGING DECARBURIZATION PER MIL	<sub>2</sub> -F-7190 IN LIEU OF LAC 0450.				
SPEC 565. USE FULL WITH THE FOLLOWIN DEFECTS ALLOWED THERE SHALL BE NO	TTIC PARTICLE INSPECTION PER AS WAVE DIRECT CURRENT (FWDC), NOT ACCEPTANCE/REJECTION CRITE IS THAT THE INSPECTION IS CONDITION INDICATIONS ALLOWED. THE INSPECTION PROCED	WET CONTINUOUS METHOD, F ERIA: NO DEFECTS ALLOWED OUCTED AT THE REQUIRED SEN PECTOR PERFORMING THE IN:	LUORESCENT TYPE THE INTENT OF NO NSITIVITY LEVEL AND SPECTION SHALL BE			
	DRAWING SPECIFICATIONS PER THI USE THE FOLLOWING:	E FOLLOWING IN LIEU OF LAC	0471 AND LAC G-14.			
	ONE COAT EXPOXY WATERBORNE AT OF EPOXY POLYAMIDE PRIMER		TYPE I, CLASS C2.			
B. FOR 36-36, APP (WHITE) PER FED-STI	LY TWO TOP COATS POLYURETHA D-595).	NE PER MIL-PRF-85285, TYPE I,	COLOR NUMBER 17925			
19. THREADS PER MII	L-S-8879, SAFETY CRITICAL.					
20. DWG 363174, 35500 NOT REQUIRED FOR 1	00, 335111, DS5025 LAC REPORT NO. MANUFACTURE.	ER4741, LAC G-220 AND LAC P	PROCESS BULL G220 ARE			
21. FIRST ARTICLE AI	PPROVAL PER SAE AMS 2375 IN LIE	U OF AMS 2375.				
22. FORGING REQUIR	22. FORGING REQUIREMENTS:					
A. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.						
FROM THE FORGING AVAILABLE AND THI	ONTRACT AWARD, THE DETAILED SOURCE, TO THE GOVERNMENT TI E FORGING SOURCE HAS AN AGREE R USE IN THE EVENT THEY ARE TH	HAT THE CERTIFIED DIES AND EMENT WITH THE DETAIL PAR	PROCEDURES ARE			
PREPARED BY		I SYMBOL	DATE			
DENISE BISHOP		LGMPM	1 Nov 01			

PAGE 2

	<del></del>		
REV:		GINEERING DATA REQUIREM. S CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER	<u> </u>	NATIONAL STOCK NUMBER	
388059-11	•	1620-00-862-4057	
THE FORGING DRAW! HAS BEEN ACCOMPLI	ING AND SAE AMS-F-719	LOT QUALIFICATION SHALL BE ACCOMP 0. THE DETAIL PART CONTRACTOR SHA SOURCE AND SHALL SUBMIT CERTIFIED	ALL ASSURE THAT THIS
B. FORGING SOUR	CE, CONTROL AND LOC	CATION OF DIES:	
1. FORGING FO	R P/N H388059-991 IS:		
DIE # 4913	<b>:</b>		:
CONTROL O	F FORGING PROCESS:	HEROUX INC. (CAGE 36164) LONGUEIL, CANADA	i
LOCATION	OF FORGING DIES:	PARK-OHIO INDUSTRIES, INC. PARK DROP FORGE CO. 777 EAST 79TH ST. CLEVELAND, OH 44103	
2. FORGING F	OR P/N 3333895-991 IS:		
DIE # 6415			
CONTROL (	OF FORGING PROCESS:	BFGOODRICH CO. (CAGE 13002) CLEVELAND, OH 44105	
LOCATION	OF FORGING DIE:	CANTON DROP FORGE, INC. 4575 SOUTHWAY STREET S.W. CANTON, OH 44706	
THE PREFERRED CON	FIGURATION FOR 38805	9 WILL BE MADE FROM 333895-991 FORGI	NG.
PREPARED BY		SYMBOL	DATE
DENISE BISHOP		LGMPM	1 Nov 01
OO-ALC FORM 462, OCT 9	6 (FF-V1) (PerFORM PRO)		PAGE 3 OF 3

(PL98-525, SECTION 2319)

STOCK NUMBER (NSN): 1620 00 862 4057 NOUN: Piston-Shock Strut, MLG Assy Of PART NUMBER (P/N) <u>: 388059-11</u> AIRCRAFT: <u>C-130</u>

#### SECTION C

### QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 3333895 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

 STOCK NUMBER (NSN): 1620 00 862 4057
 PART NUMBER (P/N) :388059-11

 NOUN: Piston-Shock Strut, MLG Assy Of
 AIRCRAFT: C-130

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$ 2000.00.
- 12. Maximum time for testing of the qualification article will not exceed 45 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 30 days.

	REVISION:	03						臣	GINEERIN	ENGINEERING DATA LIST	LIST		* HISTORY *
DATE:	04APR03	<u></u>	SDD	0	ORGN SYMBOL	SYME	!! ··		LGMPM	PR NR:		APPLICATION: C-130	PAGE 1 OF 1
CAGE: 98897	MANUFACTÜRER NAME: LOCKHEED MARTIN	RER NAME: IARTIN		-				REFEREN 388046-9	REFERENCE NR: 388046-9		NOUN: CYLIND	NOUN : CYLINDER AND PISTON	NSN : 1620012703196
CAGE	DRAWING NUMBER	UMBER	- <del>12</del>	REV SHI	NR NR FURN DIST SHEETS CARDS CODE CODE	NR	FURA	CODE	NOON	<b>5</b> .		REQUIREMENTS	
98897	98897 388046		-	0	1000	0000	ß		CYLINDER-SHOCK STRUT	STRUT			
98897	98897 337252			0	1000	0000	လ		MLG CYLINDER (FORGING)	ORGING)			
98747	98747 00-ALC/LGMPM			В	0002	0000	S		ENGR DATA REQMTS ATTACHMENT "A"	3 ATTACHMENT "A"			
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ENGI	ENGINEERING DATA LIST REMARKS	ST REMARKS							FURN O . M	FURNISHED METHOD CODE LEGEND; C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD	: LEGEND: NT. LICITATION. NG REQUIRED; NTRACT AWARD.	<ul> <li>X - DATA SUPPLIED (NOT IN EDCARS).</li> <li>R - FURNISHED BY PCD UPON REQUEST.</li> <li>P - PARTIAL DOCUMENT FURNISHED.</li> <li>V - VENDOR DRAWING;</li> <li>(NOT PROVIDED).</li> </ul>	SST. G - GOV'T DOCUMENT. SST. O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT AVAILABLE.

REV:	FUGUE				
В	ENGINE	ERING DATA REQUIREMENTS (ATTACHMENT "A")			
	ONS I/STANDARDS WILL NOT BE FURNISHED IN T IONS ARE FURNISHED FOR THE MANUFACTURE (				
Cylinder-Shock Strut, MI					
-		2 MATIONIAL CTOCK MUMBER			
2. PART NUMBER		3. NATIONAL STOCK NUMBER			
388046-9		1620 01 270 3196			
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU TED.	OF THE DATA INDICATED. THE SUPERSE	DED DATA WILL NOT BE		
<del>-</del>	n Engineering retains all rights to review major, from the Engineering Drawing Pa	• •			
and standards called out a responsible to completely	d, the contractor will certify to the gover nd required for the manufacture of this c search these manuals, specifications, and components. Any questions can be forw	ontracted landing gear component/a l standards and fully understand the	ssembly. Contractor is requirements necessary to		
7. Identification and Mar	king in area noted per MIL-STD-130, In	npression Stamping Not Permitted,	in lieu of LAC 0227.		
indicated. If the drawing items shall be accomplished contract, followed by a day A contractor who receives prior contract. If a contract	e vibropeened (with a vibrating pneumatic does not indicate a location, OO-ALC/L ed as follows: the serialization shall beging ash and the 2 digit year of manufacture, for an umerous intermittent contracts shall stated produces more than 999 items, the serialis: "S/N 98747-00-001".	ILE shall provide S/N location instruction with the CAGE (FSCM) of the colollowed by a dash and a sequentiall art serialization of items with the negative serialization.	nuctions. Serialization of contractor named on the y unique 3 digit number. ext number in sequence of the		
9. Material: 4340 VAR	Steel per SAE AMS 6414 in lieu of MIL	-S-8844, Class 1, Cond E.			
10. Finish in lieu of LAC	C 0471 and LAC G14 codes 54-36-36:				
	coat of Epoxy Waterborne Primer per Mi MIL-PRF-23377, Type I.	IL-PRF-85582, Type I, Class 2. A	alternate primer, one coat		
B. For 36-36, Apply	two top coats Polyurethane per MIL-PRF	F-85285, Type I, Color #17925 (Wh	nite) per FED-STD-595.		
11. Titanium Cadmium P	Plate per MIL-STD-1500, Type II, Class	2, as noted, in lieu of STP 58-005.			
12. Heat Treat to 260-28	0 KSI per SAE AMS-H-6875.				
13. On parts heat treated 180 KSI and above, any surface ground/machined after heat treat will be Nital Etch inspected for burns per MIL-STD-867. Grinding will be per MIL-STD-866.					
(FWDC), wet continuous r DEFECTS ALLOWED. level and there shall be no	C PARTICLE INSPECTION per ASTM method, fluorescent type. This inspection The intent of NO DEFECTS ALLOWED indications allowed. The inspector perfoloped by a Level III as specified in NAS-	n shall have the following acceptance  of is that the inspection is conducted forming the inspection will be certificated.	e/rejection criteria: NO at the required sensitivity		
PREPARED BY		CYMPOL	DATE		
Dave Dodd		LGMPM	13 Feb 03		
00-ALC FORM 462, O	CT 96 (EF-V1)(PerFORM PRO) PI	REVIOUS EDITIONS ARE OBSOLETE	PAGE OF 2		

REV:	ENGINEERING DA	TA REQUIREMENTS CONTINUATION SHEET  (ATTACHMENT "A")
PART NUMBER 388046-9	•	NATIONAL STOCK NUMBER 1620 01 270 3196

- 15. Threads per MIL-S-8879, Safety Critical.
- 16. Shot Peen exterior surfaces per SAE AMS-S-13165, .009/.012 AZ Intensity. 200% Coverage.
- 17. LAC G220 and drawing 363174 are not required to manufacture.
- 18. FORGING REQUIREMENTS:
  - A. The forging shall be procured from the original forging source using the original certified forging procedures and dies/tooling.
    - 1. Prior to contract award, the detailed part bidder shall provide certification, from the forging source, to the government that the certified dies and forging procedures are available and the forging source has an agreement with the detail parts bidder to provide forgings for their use in the event they are the successful bidder.
    - 2. Prior to production, forging lot qualification shall be accomplished as specified on the forging drawing and SAE AMS-F-7190 in lieu of LAC 0562. The detailed part contractor will assure that this has been accomplished by the forging source and will submit certified documentation of accomplishment to the government.
  - B. The forging source for P/N 337252 is,

Die# 7956 and 7626 are at Kropp Forge.
 5301 West Roosevelt Rd

Die# 7956 is controlled by the USAF. Die# 7626 is controlled by

Goodrich.

 Die# 1334-50 is at Interstate Forging. Interstate Drive Novasota, TX 77768

Die# 1334-50 is controlled by Heroux.

3. Die# 4122 is at Park Drop Forge.

Die# 4122 is controlled by Goodrich.

777 East 79th St Cleveland, OH 44103

Cicero, IL 60804

PREPARED BY	SYMBOL	DATE
Dave Dodd	LGMPM	13 Feb 03

(PL98-525, SECTION 2319)

STOCK NR (NSN): '1620 01 270 3196 PART NUMBER (P/N): 388046-9
NOUN: Cylinder-Shock Strut , MLG AIRCRAFT: C-130

#### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 3372524\_and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN):,1620 01 270 3196 NOUN: Cylinder-Shock Strut, MLG

PART NUMBER (P/N: 388046-9 AIRCRAFT:C-130

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$ 1500.00
- 12. Maximum time for testing of the qualification article will not exceed 45 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 45 days.

	REVISION:	05						E	ENGINEERING DATA LIST	SATA	LIST		* HISTORY *
DATE	23JUL02	DATA TECH:	SOH	<del> </del>	ORGN SYMBOL:	YMBO	11	1 23	LGMPM	PR NR :		APPLICATION: C-5	PAGE 1 OF 1
CAGE: 98897	E: MANUFACTÚRER NAME:	RER NAME: MARTIN		1			₩ ¥	FERE	REFERENCE NR: 4G11415-107C		NOUN: CYLINDE	NOUN: CYLINDER ASSY,STRUT	NSN: 1620004463776
CAGE	DRAWING NUMBER	NUMBER		REV SHE	NR NR FURN DIST SHEETS CARDS CODE CODE	NR F	ODEC	IST	NOUN			REQUIREMENTS	
98897	98897 DS 30001		\	ĕ	0 0000	0000	S	ä	DESIGN STD.				
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9889	98897 4G11415		\	3	0003	0000	s	E	CYLINDER OUTER.	E+	HIS DRAWING MUST	THIS DRAWING MUST BE RETRIEVED FROM BOTH WR-ALC AND 00-ALC TO GET A COMPLET	AND OO-ALC TO GET A COMPL
		V	-	_						Ω	RAWING SET (ALL	DRAWING SET (ALL 3) SHEETS OF 4G11415.	
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STA	STANDARD ENGINEERING TEXT	NG TEXT								:			

O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT AVAILABLE.

X - DATA SUPPLIED (NOT IN EDCARS).
 R - FURNISHED BY PCD UPON REQUEST.
 P - PARTIAL DOCUMENT FURNISHED.
 V - VENDOR DRAWING;
 (NOT PROVIDED).

C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD.

FURNISHED METHOD CODE LEGEND:

ENGINEERING DATA LIST REMARKS

G - GOV'T DOCUMENT.

REV:		r			
		ENGINE	ERING DATA REQUIREMENTS (ATTACHMENT "A")	:	
	NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.  THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF				
	CYLINDER, OUTER - STRUT ASSY, MLG ASSY, OF				
2. PAR	PART NUMBER 3. NATIONAL STOCK NUMBER				
	4G11415-107	C	1620 00 446 3776		
	FOLLOWING SPECIFICATED UNLESS SO INDIC	ATIONS/STANDARDS, ETC., WILL BE USED IN LIE	U OF THE DATA INDICATED. THE SUPERS	EDED DATA WILL NOT BE	
a.	Machine to meet	drawing requirements per LAC 0701, in	lieu of DS 30003.		
b.	shall be vibropeer S/N location instr CAGE of the con a dash and a sequ start serialization	drawing requirements and MIL-STD-130 med, in the location indicated. If the draw ructions. Serialization of item shall be act tractor named on the contract, followed entially unique three (3) digit number. A of item with the next number in sequence number should appear like this: "S/N 987	ring does not indicate a location, Occomplished as follows: The serialize by a dash and the two (2) digit year contractor who receives numerouse of the prior contract. If a contract	O-ALC/LILE will provide zation will begin with the r of manufacture, followed s intermittent contracts will	
c.	(FWDC), and we The intent of NO shall be no indica	inspection per ASTM E1444, in lieu of let continuous method. With the following DEFECTS ALLOWED is that the inspections allowed. The inspector performing ped by a level III, as specified in NAS-4	acceptance/rejection criteria: NO I ection is conducted at the required s the inspection shall be level II certi	DEFECTS ALLOWED. sensitivity level and there	
d.	acceptance/reject inspection is cond	per ASTM E1417, Type I, Method B or ion criteria: NO DEFECTS ALLOWED ducted at the required sensitivity level and spection shall be level II certified, with t	. The intent of NO DEFECTS ALI d there shall be no indications allow	OWED is that the ved. The inspector	
e.	Shot peen to mee	et drawing requirements per SAE AMS-S	-13165, in lieu of STP 51-501.		
f.	Heat treat, norma	lize, stabilize, and anneal, per SAE AMS	i-H-6875; in lieu of STP 54-006.		
g.	g. Any surface ground/machined after heat treat, shall be inspected for abusive grinding/machining burns per MIL-STD- 867, Grinding shall be per MIL-STD-866.				
5. T	The following chang	ges have been made in materials and spec	ifications required.		
a.		881, in lieu of AMS 4881. Alternate mate 73, and 4G13675)	erial use SAE AMS 4590, in lieu o	f AMS 4590. (Ref.	
b.	Use SAE AMS 4	881, in lieu of AMS 4881. (Ref. drawing	gs 4G13382, 4G13591, and 4G136	572)	
c.	Use ASTM B196	Alloy C95410, in lieu of QQ-B-671. (F	Ref. drawing 4G13588)		
PREPAR	RED BY		SYMBOL	DATE	
	ORIN I	HATCH	LGMPM	30 Apr 02	

REV:	ENG	GINEERING DATA REQUIREME. CONTINUA	TION SHEET		
ART N	NUMBER 4G11415-107/C	NATIONAL STOCK NUMBER 1620 00 446 3770	6		
d.	Use ASTM B196, in lieu of QQ-C-530, and S	SAE AMS 4881, in lieu of AMS 4881. (Ro	ef. drawing 4G13385)		
e.	Use ASTM B150 alloy C63000, in lieu of QQ QQ-C-390. (Ref. drawing 4G13612)	Q-C-465, alternate material use ASTM B27	1 Alloy C95400, in lieu of		
f.	Use ASTM B196 Alloy 17300 Temper TF00,	in lieu of QQ-C-530. (Ref. drawing 4G1)	3611)		
g.	Use SAE AMS 6257, in lieu of STM 05-501.	(Ref. drawing 4G13400)			
h.	Assemble wet using TT-P-1757, in lieu of MI	IL-P-8585. Ref. drawing 4G11415)			
6. I	install bushings per the following for sub zero sh	hrinkage requirements. (Ref. drawing 4G	11415 note 33)		
a.	The bushing installation shall be accomplished housing into which the bushing is installed, o installation, such as the use of a press or ham may be used to tap the bushing into alignment	r the finish on the O.D. of the bushing. Former is not permitted, and is not acceptable	orced installation of sub-zero  . A small non-metallic hammer		
b.	Prior to bushing installation, the parts and hor	using bore shall be cleaned with a solvent	to remove all contamination.		
c.	Liquid nitrogen shall be used for all sub-zero by OO-ALC/LILE engineering. The soak tim bushing to reach the same temperature as the	e of the bushing in the liquid nitrogen shall			
d.	The bushing shall be installed into the housing lost time. Trial runs shall be accomplished as about seven (7) seconds maximum.				
e.	cooling of the bushing. Detail parts in proce prior to heating, the parts shall be heated by t etc; to the maximum temperature of 250 F. T	It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, the parts shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation, or corrosion shall be permitted.			
f.	The shrunken part shall be installed into the he primer which has been brush applied. The pri prior to installation, so as to insure complete evidenced by extruded primer around the entir	mer shall be applied to the bushing outer s sealing of gaps between the housing bore	surface and the housing bore		
REPAR	RED BY	SYMBOL	DATE		
	ORIN HATCH	I CMPM	30 Apr 02		

REV:		
HEV:	ENGINEERING D	ATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
4G11415-107C	2	1620 00 446 3776
7. Drilling, reaming, ar STP 51-410.	nd honing to meet drawing specification	s, using best shop procedures and the following notes in lieu of
a. High speed steel (	HSS) drills shall be used to drill corrosi	on resistant steels.
b. HSS reamers will be premium grade hi-	be used for rough reaming, and final reaspeed tipped reamers will be used for ro	aming of steels heat treated below 200 KSI. Carbide or ough reaming of steels heat treated above 200KSI.
	I be of 150 to 500 aluminum oxide grit noes or wipers shall not be used.	with a medium-hard bond and preferably a multi-head stone.
reaming. Holes sha larger than 1/4 incl	all be finished by reaming or boring. When, the holes will be piloted with a center	hen jigs, fixtures, or bushings are not used for drilling holes r drill. Chemical, electrical, or electrochemical hole producing thod without prior approval from OO-ALC/LILE.
e. Rough reaming, the cut shall produce a	ne reamer length shall be as short as con a hole that meets the requirements of the	sistent with required penetration. Final reaming, the diameter engineering drawing.
f. Honing shall be us cannot be produce		finish better than 125 roughness height ratio is required, and
g. Carbide drills can dull or chipped co		Irills, but must be used with caution. Thay must not be used in
8. Finish per the follow	ing in lieu of DS 30000, and finish cod-	e C, CC, D, 17, 54, and 74-74.
a. Cadmium plate per	r MIL-STD-870, or QQ-P-416 to meet	drawing requirements Class 2, Type II. (code C)
b. Cadmium-titanium (code CC)	plate per MIL-STD-1500, or SAE AM	IS 2419, to meet drawing requirements Class 2, Type II.
c. Chromium plate pe	er MIL-STD-1501, Type II, Class 1. (c	ode D)
d. Primer wash is no	t required for the manufacture of this ite	em. (code 17)
e. One coat of epoxy MIL-PRF-23377,		Class C 2. (code 54). Alternate, One coat of epoxy primer per
f. Two coats of top c	oat per MIL-PRF-85285, Type I. (color	white, No. 17925 per FED-STD-595). (code 74-74)
PREPARED BY		SYMBOL

30 Apr 02

**LGMPM** 

ORIN HATCH

REV:	ENGINEERING DATA REQUIREMEN CONT (ATTACHMENT "A")	INUATION SHEET
PART NUMBER	NATIONAL STOCK NUMBER	
4G11415-107C *	1620 00 44	6 3776
9. The required forgings will be procured fro dies.	om the qualified forging source using the ori	ginal certified forging procedures and
the certified dies and forging procedure	bidder will provide certification, from the fees are available and that the forging source has the event that he is the successful bidder.	
• • • • •	cation will be accomplished as specified on a last street that this is or has been accomplished ment to the government.	
10. FORGING SOURCE, CONTROL AND	LOCATION OF DIES:	
a. Forging drawing: 4G13400-991A	Lockheed GA. CAGE 98897	
b. Control of froging:	Bendix Corp. P.O.Box 10 South Bend, IN 46624	
c. Location of froging dies:	Wyman Gordon 105 Madison St. Worcester, MA 01613	
d. Die number: 15330	wolcester, MA 01015	
11. Material Review Board disposition:		
	ains all rights to review and accept MRB dis and major, from the engineering drawing pa	
specifications, and standards called out assembly. The contractor is responsible	will certify to the government in writing ful and required for the manufacture of this con- to completely search all required document item. Any questions can be forwarded to the	ntracted landing gear component/ is and fully understand the necessary
12. After contract award the successful bidder process specifications) to LILE for final in		umentation (routing documents and
13. The following specifications are not requi	ired for manufatctre of this item.	
a. Fatigue test X998, Static test X999, an	nd DS 5025.	
b. Flag notes 60 and 61 on drawing 4G11	415 are not required.	
PREPARED BY	SYMBOL	DATE
ORIN HATCH	LGMPM	30 Apr 02

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-446-3776 NOUN: Cylinder Assy Strut

PART NUMBER (P/N)4G11415 AIRCRAFT:C-5

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>4G11415</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-446-3776</u> NOUN: <u>Cylinder Assy Strut</u> PART NUMBER (P/N)4G11415 AIRCRAFT:C-5

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$4000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:							ENGIN	INEERING DATA	TA LIST		* HISTORY *
DATE:	13FEB01	DATA TECH:	SOH	<u> </u>	ORGN SYMBOL:	YMBO	::	LGMPM	PM PR NR :		APPLICATION: C5 ACFT	PAGE 1 OF 1
CAGE: 98897	JE: MANUFACTÚRER NAME: 97 LOCKHEED MARTIN	RER NAME: MARTIN		1			E 5	REFERENCE NR: 4G51427-101A	DE NR: 01A	NOUN: PISTON,	NOUN : PISTON,LANDING GEAR	NSN: 1620004094739LE
CAGE	E DRAWING NUMBER	NUMBER	אַ	REV SHE	NR NR FURN DIST SHEETS CARDS CODE CODE	NR F	URN DI	IST	NOON		REQUIREMENTS	
98897	97 4G51427		/	00 A	0005 0	0000	်	PISTON	TON AXLE.			
98897	97 78C204		_	ĕ	0001	0000	S	0 2 2 3				2
98897	97 87C554		_	ĕ	0001 0	0000	s	3CO				
98897	97 4G51404		_	1	0001 0	0000	တ	FORC	FORGING.			
98897	14653912		-	00	0001 0	0000	ις,	BUSI	BUSHING.			
98897	10 30001			8	0000	0000	S S	DIME	DIMENSIONALL INSP.			
98897	1 LAC 0701		_	8	0 0000	0000	S	MACI	MACHINING SPEC.			
9874	98747 OO-ALC/LGMPM			ğ	0004 0	0000	Ŋ	ENGRG.	KG. DATA REQIS. (ATCH "A")	( :		
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EN	ENGINEERING DATA LIST REMARKS	IST REMARKS							FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT: S - FURNISHED WITH SOLICITATI	RAISHED METHOD CODE LEGEND: - CLASSIFIED DOCUMENT FURNISHED WITH SOLICITATION.	X - DATA SUPPLIED (NOT IN EDCARS). R - FURNISHED BY PCD UPON REQUEST. P - PARTIAL DOCUMENT FURNISHED.	<b>6</b> 0
										STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD.	V - VENDOR DRAWING; (NOT PROVIDED).	A - DATA NOT AVATLARLE

REV:				
A	ENGINE	ERING DATA REQUIREMENTS (ATTACHMENT "A")	5	
NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL	NOT BE FURNISHED IN	THE BID SET.		
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FO	R THE MANUFACTURE	OF		
PISTON,	AXLE - STRUT A	SSY. NLG ASSY. OF		
2. PART NUMBER		3. NATIONAL STOCK NUMBER		
4G51427-101A		1620 00 409 4	739	
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC FURNISHED UNLESS SO INDICATED.	, WILL BE USED IN LI	U OF THE DATA INDICATED. THE SUPE	RSEDED DATA WILL NOT BE	
a. Machine per LAC 0701, in lieu of DS	30003.			
b. Identify to meet drawing requirements shall be vibropeened, or steel stamped, does not indicate a location, OO-ALC/accomplished as follows: The serializa by a dash and the two (2) digit year of A contractor who receives numerous i sequence of the prior contract. If a con "S/N 98747-95-001"	in 0.09" letters 0.  LILE will provide tion will begin with manufacture, follontermittent contractract produces more	004" - 0.007" deep in the location S/N location instructions. Serialing the CAGE of the contractor named by a dash and a sequentially used to will start serialization of item we than 1000 items, the serial number 1000 items.	rindicated. If the drawing zation of item shall be ed on the contract, followed unique three (3) digit number. The next number in her should appear like this:	
c. Heat treat per SAE AMS-H-6875, in li shall be inspected for burns per MIL-9			und/machined after heat treat	
d. Magnetic particle inspection per ASTM (FWDC), and wet ontinuous method. Intent of NO DEFECTS ALLOWED be no indications allowed. The inspect procedure developed by a level III, as	With the following is that the inspection or performing the i	acceptance/rejection criteria: NO in is conducted at the required sensing ection shall be level II certified	DEFECTS ALLOWED. The sitivity level and there shall	
e. Shot peen to meet drawing requiremen	ts per SAE AMS -	S-13165, in lieu of STP 51-501.		
f. Machine per SAE AS 33515-4, or SAE AS 5202-4, in lieu of AND 10050-4, and use SAE AS 5202-5 in lieu of AND 10071. (Ref. drawing 4G51427)				
5. The following are material changes.				
a. Use SAE AMS 6257, or SAE AMS 6419, 300M in lieu of STM 05-501. (Ref. drawing 4G51404)				
b. Use SAE AMS 5643 17-4PH, in lieu of AMS 5643. (Ref. drawing 4G53912)				
c. Use TT-P-1757, in lieu of MIL-P-8585.				
PREPARED BY		SYMBOL	DATE	
ORIN HATCH		LGMPM	9 Jan 03	

REV:	ENGINEERING DATA REQUIREMENTS CONTINUATION SHEET			
HEV.	A	ENGINEERING D	ATA REQUIREMEN 15 CONTINUATION (ATTACHMENT "A")	SHEET
	Α		•	
PART N	NUMBER	•	NATIONAL STOCK NUMBER	
	4G51427-10	I Å	1620 00 409 4739	•
	Orilling, reaming, as TP 51-410.	nd honing to meet drawing specification	s, using best shop procedures and t	he following notes in lieu of
a.	High speed steel (	HSS) drills shall be used to drill corrosi	ion resistant steels.	
b.		be used for rough reaming, and final re- speed tipped reamers will be used for r	<del>-</del>	
c.		all be of 150 to 500 alumium oxide grit shoes or wipers shall not be used.	with a medium-hard bond and prefe	erably a multi-head stone.
d.	reaming. Holes sh larger than 1/4 inc	er be used as a final machining operationall be finished by reaming or boring. We ch, the holes will be piloted with a center be used as a final surface producing me	Then jigs, fixtures, or bushings are er drill. Chemical, electrical, or electrical.	not used for drilling holes ctrochemical hole producing
e.		the reamer length shall be as short as con a hole that meets the requirements of the		Final reaming, the diameter
f.		used as a final operation where a surface ed by other means.	finish better than 125 roughness he	ight ratio is required, and
g.	Carbide drills car dull or chipped co	n be operated at higher speeds that HSS ondition.	drills, but must be used with cautio	n. Thay must not be used in
7. F	inish per the follow	ring in lieu of DS 30000, and finish code	es C, CC, D, 46, 17, 54, and 74-74	<b>i</b> .
a.	the property of the control of the c			
b.	, , , , , , , , , , , , , , , , , , , ,			
c.	Chromium plate per MIL-C-1501, Type II, or III, Class 1. (code D) (Ref. drawing 4G51427)			
d.	. Use SAE AMS 27725, Polyurethane coating. (code 46) (Ref. drawing 4G51427)			
e.	e. Primer wash is not required. (code 17)			
f.	f. One coat of epoxy primer per MIL-P-85582, Type I, Class 2. (code 54). Alternate, One coat of epoxy primer per MIL-P-23377, Type I.			
g.				
PREPAR	ED BY		SYMBOL	DATE
	ORIN HATC	·H	LGMPM	9 Jan 03

	=			
REV:	A	ENGINEERING DA	TA REQUIREMENTS CONTINUATION (ATTACHMENT "A")	SHEET
PART N	UMBER		NATIONAL STOCK NUMBER	
	4G51427-10	1 <b>A</b>	1620 00 409 4739	
C	ontrol. The follow	ion number 4G94451, represents a specifing qualified product identification is product and used in the assembly. The product	ovided. The contractor must certify	that the qualified
a.		1A, Bearing - Kneel Roller, the qualifie 3131 Segerstrom Ave., Santa Ana, CA.	-	455, RBC Transport
9. I	nstall bushings per	the following for sub zero shrinkag req	uirements.	
a.	housing into which installation, such	llation shall be accomplished in such a men the bushing is installed, or the finish of as the use of a press or hammer is not perpeture the bushing into alignment with the hor	on the O.D. of the bushing. Forced ermitted, and is not acceptable. A su	installation of sub-zero
b.	Prior to bushing i	installation, the parts and housing bore sh	nall be cleaned with a solvent to ren	nove all contamination.
c.	by OO-ALC/LIL	hall be used for all sub-zero installations E engineering. The soak time of the bush the same temperature as the coolant.		
d.	lost time. Trial ru	be installed into the housing immediated ins shall be accomplished as necessary to econds maximum.	· -	
e.	cooling of the b prior to heating, etc; to the maxin	ally be necessary to heat the housing into sushing. Detail parts in process, which do the parts shall be heated by the use of ranum temperature of 250 F. Temperature of the part expected to reach maximum to	o not have paint or sealant or other diant heat techniques, such as therm measuring devices shall be used to	organic material applied nal blankets, infrared lamps monitor heat and shall be
f.	primer which has prior to installation	rt shall be installed into the housing bore been brush applied. The primer shall be on, so as to insure complete sealing of g ruded primer around the entire periphery	e applied to the bushing outer surface applied to the bushing outer surface and t	ce and the housing bore
PREPAR	ED BV	· · · · · · · · · · · · · · · · · · ·	CVAAROI	DATE
FNEPAK	ORIN HATCI	Н	SYMBOL LGMPM	9 Jan 03

REV:	REV: ENGINEERING DATA REQUIREME. CONTINUATION SHEET				
Α		(ATTACHMENT "A")			
PART NUMBER		NATIONAL STOCK NUMBER			
4G51427-101 <i>a</i>	A•	1620 00 409 4739			
10. The required forging and dies.	ngs will be procured from the qualified fo	orging source using the original cert	ified forging procedures		
the certified dies	award, the detail part bidder will provide and forging procedures are available and forgings for his use in the event that he i	that the forging source has an agree			
MIL-F-7190. The	on, forging lot qualification will be accome contractor will assure that this is or has needed of accomplishment to the government.	been accomplished by the forging	=		
11. FORGING SOURC	E, CONTROL AND LOCATION OF D	IES:			
a. Forging drawing	: 4G51404-991A Lockheed C	GA. CAGE 98897			
b. Control of forging	ng: Bendix Brake and Strut Die nur 3510 Westmoor St. P.O. Box 10 South Bend, IN 36625	nber: 2573902			
c. Location of forgi	ing dies: Wyman Gordon Co. CAG	E 79448			
12. Material Review Bo	oard disposition:				
•	ystem engineering retains all rights to rev All deviations, minor and major, from the	• •	=		
b. Prior to contract award, the contractor will certify to the government in writing full compliance with manuals, specifications, and standards called out and required for the manufacture of this contracted landing gear component/ assembly. The contractor is responsible to completely search all required documents and fully understand the necessary requirements to manufacture the stated item. Any questions can be forwarded to this offece OO-ALC/LILE					
13. After contract award the successfull bidder shall provide a copy of the processing documentation (routing documents and process specifications) to LILE for final review before production begins.					
14. The following specif	14. The following specifications are not required for the manufacture of this item.				
a. DS 5025, Fatgue	test X995, and Static test X999.				
b. Disregard flag no	otes 52, 54, 57, 58, and 61. (Ref. drawin	ng 4G51427)			
PREPARED BY		SYMBOL	DATE		
ORIN HATCH	ł	LGMPM	9 Jan 03		

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-00-409-4739 NOUN: Nose Piston Axle PART NUMBER (P/N)<u>4G51427-101A</u> AIRCRAFT:C-5

### **SECTION C**

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <a href="4651427-101A"><u>4651427-101A</u></a> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-00-409-4739</u> NOUN: <u>Nose Piston Axle</u> PART NUMBER (P/N)4G51427-101A AIRCRAFT:C-5

- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

- 10. Remarks:
  - a. Organic verification capabilities exist at OO-ALC.
  - b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$5000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

<u></u>	REVISION:	10					E	ENGINEERING DATA LIST	A LIST	* HISTORY *
DATE	ъ: 06МАY03	DATA TECH: SDA	Ϋ́	ORGN SYMBOL	N SYM	BOL:		LGMPM PR NR :	APPLICATION: F15	PAGE 1 OF 1
CAGE: 76301		MANUFACTURER NAME: BOEING CO/MC DONNELL ACFT					REFER	REFERENCE NR: 68A450704-1003	NOUN: PISTON,LINEAR ACTUA	NSN : 1620010232138
CAGE	E DRAWING NUMBER	NUMBER	REV	NR SHEETS	CARD	NR FURN DIST CARDS CODE CODE	DIST	NOUN	REQUIREMENTS	
9874	98747 00-ALC/LGMPM-FORM 462	IRM 462 /		0004	0000	s		ENG. DATA ROMNTS. (ATTACH."A")		
76301	1 PS 15063	/		0000	0000	S		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	,
76301	11 PS 20018	/		0000	0000	S		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301	11 PS 23041	/		0000	0000	S		PROCESS SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630.	76301 ST4M139	/		0000	0000	S		BUSHING	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630.	76301 68A450604 WITH P/L	/ / // // // // // // // // // // // //		0002	0000	S		PISTON-FORGING N.L.G.	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630.	76301 68A450675 WITH P/L	P/L /		0001	0000	s		PLUG, PISTON AXLE N.L.G.	OBTAIN DATA FROM WR-ALC (JEDMICS)	
76301	68A450704 WITH	P/L /		0003	0000	S		PISTON ASSEMBLY, N.L.G.	OBTAIN DATA FROM WR-ALC (JEDMICS)	
	:									
STAI	STANDARD ENGINEERING TEXT	ING TEXT								
	ALL GOVERNMENT/	ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED.	NOI.	AND ST	FANDAR	IM SCR	LL NOT	C BE FURNISHED.		
	TO OBTAIN THESE DODSSP	TO OBTAIN THESE SPECS AND STDS WRITE TO: DODSSP	TE TO	 						
	BUILDING 4/SECTION D 700 ROBINS AVE.	ION D								
-	PHILADELPHIA PA. 19111-5098	19111-5098 ) 407-2170							,	
· ·	TELEPHONE: (215) 69/-21/9 FAX: (215) 697-1462	1462 TO VIEW C	IR ORL	ER: HI	(TP://	WWW.D	DSSP.	TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS.MIL		
Ë	ENGINEERING DATA LIST REMARKS	LIST REMARKS						FURNISHED METHOD CODE LEGEND:  C - CLASSIFIED DOCUMENT.  S - FURNISHED WITH SOLICITATION.  M - STABLE BASE DRAWING REQUIRE	X - NO. P - RED; V -	5 A
_								FURNISHED WITH	FURNISHED WITH CONTRACT AWARD. (NOT PROVIDED).	AVAILABLE.

REV:	5401	NEEDING DATA I INDESCRIPTION	
	ENGI	NEERING DATA L_JUIREMENTS (ATTACHMENT "A")	
	I ONS I/STANDARDS WILL NOT BE FURNISHED		
	TIONS ARE FURNISHED FOR THE MANUFACT		
PISTON ASSEMBLY, N	OSE LANDING GEAR	F-15	
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
68A450704-1003		1620-01-023-2138	
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION		LIEU OF THE DATA INDICATED. THE SUPERS	SEDED DATA WILL NOT BE
5. Use Material SAE AM	AS 6419 in lieu of AMS 6419, DRAV	VING 68A450604 (FORGING).	
6. Mark & Identify per	MIL-STD-130, as an alternate to PS	16001.	
vibropeened, or steel indicate a location, O follows: The serializ digit year of manufac numerous intermittent contract produces mo	stamped, in 0.09" letters 0.004"-0.0 O-ALC/LGHLEN will provide S/N lation will begin with the CAGE of the ture, followed by a dash and a sequent contracts will start serialization of its contracts.	statement in lieu of PS 16001) Seria 2007" deep in the location indicated. If location instructions. Serialization of it is contractor named on the contract, intially unique 3 digit number. A contribute with the next number in sequence should begin using 4 digit serial number.	the drawing does not item shall be accomplished as followed by a dash and the 2 ractor who receives to of the prior contract. If a
8. Inspection requiremen	ts are as follows:		
wet continuous r The intent of NC shall be no indic	nethod, fluorescent type with the following DEFECTS ALLOWED is that the i	44 in lieu of PS 21201. Use full wave owing acceptance/rejection criteria: Naspection is conducted at the required ming the inspection shall be certified trified in NAS-410.	O DEFECTS ALLOWED. sensitivity level and there
with the following ALLOWED" is allowed. The ins	ng acceptance/rejection criteria: NO that the inspection is conducted at the	E1417, Type I, Method B or C, Level DEFECTS ALLOWED. The intent of e required sensitivity level and there will be certified to Level II with the inspection.	f "NO DEFECTS will be no indications
C. Ultrasonic Inspe	ction per MIL-STD-2154 may be use	ed as an alternate to PS 21211.1, DRA	WING 68A450704(Note 30).
9. Threads per MIL-S-7	742. (SAFETY CRITICAL)		
10. Shot Peen per SAE accomplished.	AMS -S-13165 as an alternate to PS 1	4023, all requirements of Drawing 68	A450704 ( Note 22) will be
11. Heat Treat Steel per	SAE AMS-H-6875 as an alternate to	PS 15296.	
	ted to 180 KSI and above, any surfaction of the contract of th	te that is ground/machined after heat tr Grinding shall be per MIL-STD-866.	reat, shall be inspected for
PREPARED BY  DAVID H. ARGYLE		LGMPM	21 May 03

PAGE

REV:		ENGINEERING DATA REQUIREMENT "A")  (ATTACHMENT "A")				
PART	NUMBER		NATIONAL STOCK NUMBER			
68A	450704-1003	,	1620-01-023-2138			
13.	Temper Etch per M	IL-STD-867 as an alternate to PS 21205.				
14.	Low Embrittlement	Cadmium Plate per MIL-STD-870 (Typ	e II, Class2) as an alternate to PS	13144 (Type II, Class 2).		
15.	Chromium Plate per	MIL-STD-1501 (Type II, Class 3) as a	n alternate to PS 13102.			
16.	Finish Specification Drawing 68A45070	68A900000 and 40M114 will not be full and PS 13646:	irnished. Finish per the following	as an alternate to (Note 27,		
		Epoxy Waterborne primer per MIL-PRF de per MIL-PRF-23377, Type I.	-85582, Type I, Class 2. Alternate	primer, one coat		
	2. Apply two topc	oats of Polyurethane per MIL-PRF-8528	35, Type I, color #17925 (White) po	er FED-STD-595.		
17.		d the successful bidder shall provide a constant to LGHLEN for final review before p	· · · · · · · · · · · · · · · · · · ·	(routing documents and		
18.		N system engineering retains all rights to ns, minor and major, from the engineering	•	-		
19.	specifications, and component/assemb	vard, the contractor will certify to the good standards called out and required for the ly. Contractor is responsible to complete uirements necessary to manufacture land GHLEN.	e manufacture of this contracted land ly search these manuals, specification	ding gear ons, and standards and fully		
PREP	ARED BY		SYMBOL	DATE		
DA	VID H. ARGYLE		LGMPM	21 May 03		
00-	ALC FORM 462 OCT 9	6 (EF-V1) (PerFORM PRO)		PAGE OF 4		

REV:	ENGINEERING DATA REQUIREMEN' UNTINUATION SHEET (ATTACHMENT "A")	
PART NUMBER	NATIONAL STOCK NUMBER	
68A450704-1003	1620-01-023-2138	

- 20. Install Bushings per the following, as an alternate to PS 17034:
  - A. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - B. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - C. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILE Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.
  - D. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.
  - E. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F.Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.
  - F. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - G. Bushings with flanges shall be installed in a similar manner as paragraph (F). Except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange forming a bead. Wipe any excess sealant from the other end of the bushing also.
  - H. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation, and face of lug will be coated with MIL-PRF-81733 per paragraph G.

PREPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	21 May 03

REV:		ENGINEERING DATA REQUIREMI CO	ONTINUATION SHEET
		(ATTACHMEN, "A"	)
PART	NUMBER	NATIONAL STOCK NUMB	BER
68A	450704-1003	1620-01-023-2138	
21.	Per Drawing requirements Steel Fo	rging Cleanliness per SAE AMS 2300 in lieu	of AMS 2300.
22.	Per Drawing requirements Accepta	nce and Inspection of forgings per SAE AMS	-F-7190 as an alternate to PS 23006.
23.	The required forging shall be procuand dies/tooling.	ired from the qualified forging source, using th	ne original certified forging procedures
	that the certified dies and pr	etail part bidder shall provide certification, from cocedures are available and that the forging sou for their use in the event they are the successful	rce has an agreement with the detail parts
	SAE AMS-F-7190 (STEEL).	of qualification shall be accomplished as specific. The detailed part contractor shall assure that the documentation of accomplishment to the Go	his has been accomplished by the forging
24.	FORGING SOURCE, CONTROL	AND LOCATION OF DIES:	
	1. Forging Drawing:	68A450604	
	2. Die Number:	6745	
	3. Control of Forging Process:	McDonnel Douglas Corp.	
	4. Location of Forging Dies:	KROPP FORGE COMPANY 5301 W. Roosevelt Road Cicero, IL 60650-1273 PH. (708) 652-6691	
25.	INSTRUCTIONS FOR QUALIFIC	CATION OF NEW FORGING SOURCE.	
	new forging dies and the proposed without the express consent of the use of the dies developed under t	actor will advise the government in writing of the difference of the contractor will not proceed a government procuring agency. The government his contract. The contractor will inform the forces is placed, that the government has unlimited the Contracting Officer.	eed to obtain new dies ent will have unlimited rging house in writing, at
	ARED BY	SYMBOL	DATE
υA۱	VID H. ARGYLE	LGMPM	21 May 03

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620010232138</u> NOUN: Piston assembly, NLG

PART NUMBER (P/N)<u>68A450704-1003</u> AIRCRAFT:F-15

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>68A450604-2007</u> and specification <u>SAE-AMS-H-6875</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620010232138 NOUN: Piston assembly, NLG PART NUMBER (P/N)<u>68A450704-1003</u> AIRCRAFT:F-15

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.
- 4. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. The offeror must demonstrate that the forging vendor controlling the forging dies and tooling will give the offeror unrestricted access.

	REVISION: 02	02						EN	ENGINEERING DATA LIST	LIST	*	* HISTORY *
DATE	TE: 08FEB02	DATA TECH:	STJ		ORGN	ORGN SYMBOL:	30L:	I	LGMPM PR NR :		APPLICATION: F15	PAGE 1 OF 1
CAGE: 76301	JE: MANUFACTURER NAME 01 BOEING	JRER NAME:						REFEF 68A41	REFERENCE NR: 68A412704-1004	NOUN : PISTON,LA!	NOUN : PISTON,LANDING GEAR	NSN : 1620014451436
CAGE	E DRAWING NUMBER	NUMBER		REV 8	NR NR FURN DIST SHEETS CARDS CODE CODE	NR	FURN	FURN DIST CODE CODE	NOUN		REQUIREMENTS	
7630	76301 MMS224		/		0000	0000	ß		MATERIAL SPECIFICATION	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
7630	76301 PS 11005		,	×	0000	0000	s		BONDING OF ETCH TEFLON	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	9
7630	76301 PS 15063		\	æ	0000	0000	ß		STRESS RELIEVE	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
7630	76301 PS 15500		`		0000	0000	ß		GENERAL HEAT TREATING	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
7630	76301 PS 15548		\	5	0000	0000	s		AGE HARDEN	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
7630	76301 PS 17165		\	Σ	0000	0000	ß		ETCHING FOR BONDING SURFACE	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
7630	76301 PS 23041		\	z	0000	0000	s		MACHINE FINISH	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
7630	76301 68A410636 W/PL		`	υ	0000	0000	s		BUSHING, FLANGED, TORQUE ARM LUG OBTAIN DATA FROM WR-ALC JEDMICS.	OBTAIN DATA FROM W	R-ALC JEDMICS.	
7630	76301 68A412704 W/PL		/	ц	0000	0000	S		PISTON ASSEMBLY MIG	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
	/18EO									ECO A497011		
	/19E0									ECO A197563		
	/2050									ECO A183099		
7630	76301 68A413711 W/PL		`	4	0000	0000	ß		PAD-BRAKE LINE	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
7630	76301 68B410067 W/PL		\	Д	0000	0000	ß		HEAD, PISTON MLG	OBTAIN DATA FROM WR-ALC JEDMICS.	R-ALC JEDMICS.	
STA	STANDARD ENGINEERING TEXT	ING TEXT										
_	ALE COVERNMENT/WITTINGS CORPITETORITONS AND CITABODA WILL NOT BE	TICORD SOKETITE	FECT	OMO	TO CHA	CO KILLY	100	CIN TIT	T de emonteuen			

ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED. TO OBTAIN THESE SPECS AND STDS WRITE TO:

BUILDING 4/SECTION D

700 ROBINS AVE.
PHILADELPHIA PA. 19111-5098
TELEPHONE: (215) 697-2179
FAX:

FAX: (215) 697-1462 TO VIEW OR ORDER: HTTP://www.DODSSP.DAPS.MIL

# ENGINEERING DATA LIST REMARKS

C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD.

FURNISHED METHOD CODE LEGEND:

- R FURNISHED BY PCD UPON REQUEST.
  P PARTIAL DOCUMENT FURNISHED.
  V VENDOR DRAWING;
  (NOT PROVIDED).
- O OTHERS, CONTRACTOR MUST ACQUIRE. A DATA NOT AVAILABLE.

G - GOV'T DOCUMENT.

X - DATA SUPPLIED (NOT IN EDCARS).

REV:	ENGI	NEERING DATA had JIREMENTS (ATTACHMENT "A")	
	DARDS WILL NOT BE FURNISHED IN THE BID SET.		
THE FOLLOWING INSTRUCTIONS ARE FU PISTON ASSEMBLY MI	*	F-15	
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
68A412704-1004		1620-01-445-1436	
		· · · · · · · · · · · · · · · · · · ·	
	DARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. TI		
	engineering retains all rights to review major, from the engineering drawing pa		
and standards called out at responsible to completely	d, the contractor will certify to the governd required for the manufacture of this conservations search these manuals, specifications, as components. Any questions can be forward.	contracted landing gear component, and standards and fully understand the contract of the cont	assembly. Contractor is ne requirements necessary to
c. Inspection requirement	ts are as follows:		
Class A, with the follow ALLOWED" is that the inspector perform as specified in MIL-ST 2. Perform Magnetic (FWDC), wet continue ALLOWED. The interflevel and there shall be	t penetrant inspection per ASTM E1417 by powing acceptance/rejection criteria: NO the inspection is conducted at the require ting the inspection shall be certified to le ITD-410.  Particle inspection per ASTM E1444, it is possible to the inspection of "NO DEFECTS ALLOWED" is a no indications allowed. The inspector is seed eveloped by a Level III as specified	DEFECTS ALLOWED. The intended sensitivity level and there shall be evel II with the inspection procedure in lieu of PS 21201 CLASS B. Use ollowing acceptance/rejection criteristat the inspection is conducted at the performing the inspection shall be of the conducted at the cond	et of "NO DEFECTS et no indication allowed. et developed by a level III et full wave direct current ha: NO DEFECTS he required sensitivity
d. Mark and identify per	MIL-STD-130 as an alternate to PS1600	01. (ref. note #19)	
e. Heat treat to drawing s	specifications per MIL-STD-6875 as an	alternate to PS 15296 or PS 15351.	
(with vibrating pneumation a location, OO-ALC/LILI serialization shall begin work of manufacture, followed contracts shall start seriali	and components utilize the following state pencil), in 0.09" letters 0.004"-0.007" E shall provide S/N location instructions ith the cage (FSCM) of the contractor n by a dash and a sequentially unique 3 dization of item with the next number in sher should begin using 4 digit serial number should begin using 4 digit serial number.	deep in the location indicated. If a s. Serialization of item shall be acc amed on the contract, followed by igit number. A contractor who rec sequence of the prior contract. If a	the drawing does not indicate complished as follows: the a dash and the 2 digit year eives numerous intermittent contract produces more than
_	to 180KSI and above, any surface groun per MIL-STD-867. Grinding shall be p		e inspected for abusive
h. Temper Etch per MIL	-STD-867 may be used as an alternate to	PS 21205.	
i. Cadmium Plate per MI	L-STD-870 Type II, Class 2 as an altern	nate to PS 13144 13101 & PS 1314	<del>14</del> .
PREPARED BY		SYMBOL	DATE
TERRY L. JONES		LGMPM	19 Nov 01
00-ALC FORM 462, OCT 96 (	<i>EF-V1)(PerFORM PRO)</i> P	REVIOUS EDITIONS ARE OBSOLETE	PAGE OF

REV:	ENGINEERING DATA REQUIREME ATTINUATION SHEET
	(ATTACHMENT "A")
PART NUMBER	NATIONAL STOCK NUMBER
68A412704-1004	1620-01-445-1436

- j. Chromium Plate per MIL-STD-1501, Type II, Class 3 as an alternate to PS 13102.
- k. Install bushings per the following in lieu of PS 17034.
  - a. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small nonmetallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - b. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - c. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LILEC engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.
  - d. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.
  - e. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, the parts shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. The temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling, oxidation, or corrosion shall be permitted.
  - f. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-S-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - g. Bushings with flanges shall be installed in a similar manner as paragraph (F) except sealant shall also be applied to face or lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant amount periphery of bushing flange forming a bead. Wipe any excess sealant from other end of bushing flange forming a bead. Wipe any excess sealant from other end of bushing also.
  - h. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation and face of lug will be coated with MIL-S-81733 per paragraph g.
- 1. Finish per the following in lieu of note # 26.
  - a. Apply one coat epoxy waterborne primer per MIL-PRF-85582, Type I Class 2. Alternate one coat of epoxy polyamide primer per MIL-PRF-23377 Type I. Apply two topcoats polyurethane per MIL-PRF-85285, Type I, color number 17925 (white) per FED-STD-595, in lieu of MIL-C-83286, which has been cancelled.
- m. Shot Peen per SAE AMS-S-13165 as an alternate to PS 14023. (Insure all requirements of drawing 68A412704 note #27 are complied with.

PREPARED BY	SYMBOL	DATE
TERRY L. JONES	LGMPM	19 Nov 01

REV:		ENĢINEERING	DATA REQUIREMEN TINUATION SHEET (ATTACHMENT M')	
PART NUMBER			NATIONAL STOCK NUMBER	
68A412704-1004	2		1620-01-445-1436	
n. Phosphate Coat per M	IIL-P-16232 as an altern	ate to PS 13205.		
o. Ion Vapor Deposit Al	uminum (IVD) per MIL	-C-83488 as an a	lternate to PS 13143.	
p. Anodize per MIL-A-8	3625 Type II, Class 1, as	an alternate to I	PS 13201.	
q. Grind per MIL-STD-	866 as an alternate to PS	20710.		
r. Bearing General speci	fication Qualifications M	MIL-B-81934 has	s been cancelled use SAE AS 8193	4 .
s. QQ-C-530 condition '	'H" can be used as an alt	ternate to PS1593	3.	
5. The required forging dies/tooling.	will be procured from th	ne qualified forgi	ng source using the original certific	ed forging procedures and
	procedures are available	e and that the for	ertification, from the forging source ging source has an agreement with bidder.	
The contractor will assur	e that this is or has been	accomplished by	plished as specified on the forging the forging source and will submit h forging per MIL-STD-2154.	
FORGING SOURCE,	CONTROL AND LOC	ATION OF DIES	S:	
1. FORGING DRAW	VING:			
Drawing Number:		68A412704		
Part Number		68A412704-10	004	
Die Number:		7782		
2. CONTROL OF FO	RGING PROCESS:	McDonnell Do	Duglas	
3. LOCATION OF F	FORGING DIES:	Kropp Forging 5301 West Ro Cicero, Illiono	oosevelt Road	
			1 EXT. 324 (Chuck Meyers)	
PREPARED BY			SYMBOL	DATE
TERRY L. JONES			LGMPM	19 Nov 01

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620014451463</u> NOUN: Piston Assembly, Main Landing Gear PART NUMBER (P/N)68A41d2704-1004

AIRCRAFT:F-15E

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>68A41d2704-1004</u> and specification <u>SAE-AMS-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620014451463

PART NUMBER (P/N)68A41d2704-1004

NOUN: Piston Assembly, Main Landing Gear

AIRCRAFT:F-15E

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$96.000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

<u> </u>	REVISION:							ENG	GINEERING DATA LIST	LIST	* HISTORY *
DATE	E: 07FEB03	DATA TECH:	SDA	<u> </u>	RGN S	ORGN SYMBOL:	.: ]	Ţ	LGMPM PR NR:	APPLICATION: F15	PAGE 1 OF 1
CAGE: 76301		AANUFACTURER NAME: BOEING CO/MC DONNELL ACFT	F				₩ 9	REFERENCI 68A412704-	ENCE NR: 704-1003	NOUN : PISTON,LANDING GEAR	NSN : 1620014450092
CAGE	DRAWING NUMBER	NUMBER	<u> </u>	REV SH	NR IEETS	NR NR FURN DIST SHEETS CARDS CODE CODE	FURN DIST CODE CODE	CODE	NOUN	REQUIREMENTS	
7630	76301 MMS224		\	°	0000	0000	w		MATERIAL SPECIFICATION	OBTAIN DATA FROM WR-ALC (JEDMICS)	
9874	98747 00-ALC/FORM 462		\	-	0003	0000	s	<u> </u>	ENG.DATA ROMNTS. (ATTACH. "A")		
7630	76301 PS 11005		\	-	0000	0000	s	М	BONDING OF ETCH TEFLON	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630	76301 PS 15063		\	0	0000	0000	s	3,	STRESS RELIEF	OBTAI DATA FROM WR-ALC (JEDMICS)	
76301	1 PS 15500		_	-	0000	0000	ß		GENERAL HEAT TREATING	OBTAIN DATA FROM WR-ALC(JEDMICS)	
7630	76301 PS 15548		\	0	0000	0000	w		AGE HARDEN	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630	76301 PS 17165		\	0	0000	0000	ß	-	ETCHING FOR BONDING SURFACE	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630	76301 PS 23041		\	0	0000	0000	S	_	MACHINE FINISH	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630	76301 68A410636 WITH P/L	P/L	\	U	0000	0000	ß		USHING, FLNGD. TRQ. ARM LUG M.L.G.	BUSHING, FLNGD.TRQ.ARM LUG M.L.G. OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630	76301 68A412704 WITH P/L	P/L	\	о <b>ш</b>	0000	0000	S		PISTON ASSEMBLY-M.L.G.	OBTAIN DATA FROM WR-ALC (JEDMICS)	
	/1850							<del>                                     </del>		ECO A497011	
	/19E0			_						ECO A197563	
	/2050									ECO A183099	
7630	76301 68A413711 WITH P/L	P/L	\	0	0000	0000	ဟ		PAD-BRAKE LINES	OBTAIN DATA FROM WR-ALC (JEDMICS)	
7630	76301 68B410067 WITH P/L	P/L	\	e e	0000	0000	တ		HEAD, PISTON-MAIN LANDING GEAR	OBTAIN DATA FROM WR-ALC (JEDMICS)	
				_							
STA	STANDARD ENGINEERING TEXT	ING TEXT									

ALL GOVERNMENT/MILITARY SPECIFICATIONS AND STANDARDS WILL NOT BE FURNISHED. TO OBTAIN THESE SPECS AND SIDS WRITE TO:

BUILDING 4/SECTION D 700 ROBINS AVE.

TO VIEW OR ORDER: HTTP://WWW.DODSSP.DAPS.MIL PHILADELPHIA PA. 19111-5098 TELEPHONE: (215) 697-2179 FAX: (215) 697-1462 TO

# ENGINEERING DATA LIST REMARKS

- C CLASSIFIED DOCUMENT. S FURNISHED WITH SOLICITATION. M STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD. FURNISHED METHOD CODE LEGEND:
- R FURNISHED BY PCD UPON REQUEST.
  P PARTIAL DOCUMENT FURNISHED.
  V VENDOR DRAWING;
  (NOT PROVIDED).
- O OTHERS, CONTRACTOR MUST ACQUIRE. A DATA NOT AVAILABLE.

G - GOV'T DOCUMENT.

X - DATA SUPPLIED (NOT IN EDCARS).

REV:			
nev:	ENGINEE	RING DATA REQUIREMENTS	
		(ATTACHMENT "A")	
	IONS I/STANDARDS WILL NOT BE FURNISHED IN T		
PISTON ASSEMBLY-M	IAIN LANDING GEAR	F-15	
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
68A412704-1003		1620-01-445-0092	
4. THE FOLLOWING SPECIFIC FURNISHED UNLESS SO INDIC	ATIONS/STANDARDS, ETC., WILL BE USED IN LIEU CATED.	J OF THE DATA INDICATED. THE SUPERSI	EDED DATA WILL NOT BE
A. Mark and Identify p	er MIL-STD-130 as an alternate to PS160	001. (REF. NOTE #19)	
vibropeened, or stee a location, OO-ALC follows: The serial digit year of manufa numerous intermitte contract produces m	s and components utilize the following stated stamped, in 0.09" letters 0.004"-0.007" C/LGHLEN will provide S/N location institution will begin with the CAGE of the cacture, followed by a dash and a sequential ent contracts will start serialization of item from the than 999 items, the serial number shothis: S/N 98747-01-003."	deep in the location indicated. If the fructions. Serialization of item shall ontractor named on the contract, if ally unique 3 digit number. A contract number in sequence	the drawing does not indicate be accomplished as followed by a dash and the 2 ractor who receives to of the prior contract. If a
C. Inspection requirem	ents are as follows:		
with the following ALLOWED" is allowed. The instance of the in	cent penetrant inspection per ASTM E141 ng acceptance/rejection criteria: NO DEF that the inspection is conducted at the receptor performing the inspection shall be a specified in NAS 410.	FECTS ALLOWED. The intent of 'quired sensitivity level and there wi	"NO DEFECTS Il be no indications
wet continuous The intent of N shall be no indi	etic ParticleInspection per ASTM E1444 in method, fluorescent type with the followi O DEFECTS ALLOWED is that the inspectations allowed. The inspector performing edure developed by a Level III as specified	ng acceptance/rejection criteria: No ection is conducted at the required at the inspection shall be certified to	O DEFECTS ALLOWED. sensitivity level and there
D. Shot Peen per SAE are complied with).	AMS -S-13165 as an alternate to PS 1402	3. (Insure all requirements of Drav	wing 68A412704, Note #27
E. Heat Treat Beryl Co	opper per SAE AMS-H-7199 as an alternat	te to PS 15935. (DRAWING 68A4	10636, Note #13)
F. Heat Treat Steel pe	r SAE AMS-H-6875 as an alternate to PS	15296 and PS 15351.	
•	ated to 180 KSI and above, any surface the achining burns per MIL-STD-867.	at is ground/machined after heat tre	at, shall be inspected for
H. Grind per MIL-STD	-866 as an alternate to PS 20710.		
I. Temper Etch per MII	L-STD-867 as an alternate to PS 21205.		
J. Bearing General Spec	effication Qualifications MIL-B-81934 has	been cancelled, use SAE AS 8193	4.
PREPARED BY		SYMBOL	DATE
DAVID H ARGYLF		I GMPM	7 Mar 03

REV:	ENGINEERING DA	TA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
68A412704-1003	1	1620-01-445-0092

- K. Install Bushings per the following, as an alternate to PS 17034:
  - 1. The bushing installations shall be accomplished in such a manner as to avoid damage to the finish on the I.D. of the housing into which the bushing is installed, or the finish of the O.D. of the bushing. Forced installation of sub-zero installations, such as the use of a press or hammer is not permitted, and is not acceptable. A small non-metallic hammer may be used to tap the bushing into alignment with the housing bore, or to seat the bushing.
  - 2. Prior to bushing installation, the parts and housing bore shall be cleaned with a cleaning solvent to remove all contamination.
  - 3. Liquid nitrogen shall be used for all sub-zero installations unless some other sub-zero coolant is specified, and approved by OO-ALC/LGHLEN Engineering. The soak time of the bushing in the liquid nitrogen shall be sufficient to allow the bushing to reach the same temperature as the coolant.
  - 4. The bushing shall be installed into the housing immediately upon removal from the coolant with an absolute minimum of lost time. Trial runs shall be accomplished as necessary to minimize installation time which should be in the order of about seven (7) seconds maximum.
  - 5. It may occasionally be necessary to heat the housing into which the bushing is to be installed, in addition to sub-zero cooling of the bushing. Detail parts in process, which do not have paint or sealant or other organic material applied prior to heating, shall be heated by the use of radiant heat techniques, such as thermal blankets, infrared lamps etc.; to the maximum temperature of 250 F. Temperature measuring devices shall be used to monitor heat and shall be located on areas of the part expected to reach maximum temperature. No scaling oxidation, or corrosion shall be permitted.
  - 6. Bushings without flanges shall be installed into housing bore which has received a light coat of sealant per MIL-PRF-81733. Install shrunken bushing and wipe off any excess sealant that may have extruded around the periphery of both ends of the bushings.
  - 7. Bushings with flanges shall be installed in a similar manner as paragraph F. Except sealant shall also be applied to face of lug under flange. Sealant shall be applied in such a manner as to ensure complete coverage of inside face of bushing flange when bushing is installed. Wipe off any excess sealant around periphery of bushing flange forming a bead. Wipe any excess sealant from the other end of the bushing.
  - 8. For bushings with external grease grooves the inside of the lug will be coated with MIL-C-16173 prior to bushing installation, and face of lug will be coated with MIL-PRF-81733 per paragraph G.

PREPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	7 Mar 03

REV:	ENGINEERING	DATA REQUIREMENTS CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER		NATIONAL STOCK NUMBER
68A412704-1003	3	1620-01-445-0092
L. Use Material SAE	AMS 6419 in lieu of AMS 6419. (DRA	AWING 68A412704)
M. Use Material SAE	E AMS-225/9 in lieu of QQ-A-225/9. (I	DRAWING 68B410067)
N. Use Material AST	M B196, ASTM B197, and B194 in lie	eu of QQ-C-530, Condition "H". (DRAWING 68A410636)
O. Threads per MIL-	S-8879. (SAFETY CRITICAL)	
P. Cadmium Plate pe	r MIL-STD-870 (Type II, Class 2) as an	alternate to PS 13101 & PS 13144.
Q. Chrome Plate per	MIL-STD-1501( Type II, Class 3) as an	n alternate to PS 13102.
R. Anodize per MIL	-A-8625 (TYPE II, CLASS 1) as an alte	ernate to PS 13201.
S. Phosphate Coat po	er MIL-DTL-1632 as an alternate to PS	13205.
T. Ion Vapor Deposit	Aluminum (IVD) per MIL-DTL-83488	as an alternate to PS 13143.
-	ation 68A900000 and 40M114 are not reing Note #26 and PS 13646:	equired and will not be furnished. Finish per the following as an
	at Epoxy Waterborne primer per MIL-Plaide per MIL-PRF-23377, Type I.	RF-85582, Type I, Class 2. Alternate primer, one coat
2. Apply two top	pcoats of Polyurethane per MIL-PRF-85	5285, Type I, color #17925 (White) per FED-STD-595.
	vard the successful bidder shall provide a tions) to LILE for final review before pr	copy of the processing documentation (routing documents and roduction begins.
		s to review and accept MRB'S prior to shipment of discrepant ering drawing package will be submitted for MRB disposition.
specifications, a component/assen	nd standards called out and required for ably. Contractor is responsible to complete equirements necessary to manufacture la	government in writing, full compliance with manuals, the manufacture of this contracted landing gear etely search these manuals, specifications, and standards and fully nding gear components. Any questions can be forwarded to this

SYMBOL

LGMPM

DATE

7 Mar 03

PREPARED BY

DAVID H. ARGYLE

REV:	ENGINEERING DATA REQUIREMEN CONTINUATION SHEET (ATTACHMENT "A")
PART NUMBER	NATIONAL STOCK NUMBER
68A412704-1003	1620-01-445-0092

- Y. The required forging shall be procured from the qualified forging source, using the original certified forging procedures and dies/tooling.
  - 1. Prior to contract award, the detail part bidder shall provide certification, from the forging source, to the Government that the certified dies and procedures are available and that the forging source has an agreement with the detail parts bidder to provide forgings for their use in the event they are the successful bidder.
  - 2. Prior to production, forging lot qualification shall be accomplished as specified on the forging drawing and SAE AMS-F-7190 (STEEL). The detailed part contractor shall assure that this has been accomplished by the forging source and shall submit certified documentation of accomplishment to the Government.
- Z. FORGING SOURCE, CONTROL AND LOCATION OF DIES:

1. Forging Drawing:

68A412704-2005

2. Die Number:

7782

3. Control of Forging Process:

McDonnel Douglas Corp.

4. Location of Forging Dies:

Kropp Forging Company 5301 West Roosevelt Road Cicero, Illinois 60650-1273

(708) 652-6691

AA. INSTRUCTIONS FOR QUALIFICATION OF NEW FORGING SOURCE.

Prior to contract award, the contractor will advise the government in writing of their intent to procure new forging dies and the proposed forging source. The contractor will not proceed to obtain new dies without the express consent of the government procuring agency. The government will have unlimited use of the dies developed under this contract. The contractor will inform the forging house in writing, at the same time the order for the dies is placed, that the government has unlimited use rights of the dies and forward a copy of this letter to the Contracting Officer.

REPARED BY	SYMBOL	DATE
DAVID H. ARGYLE	LGMPM	7 Mar 03

OF

(PL98-525, SECTION 2319)

STOCK NR (NSN) 1620014450092 NOUN: PISTON ASSEMBLY PART NUMBER (P/N) <u>68A412704-1003</u> AIRCRAFT:F-15

### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>68A412704-1003</u> and specification <u>SAE-AMS-H-6875</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK NR (NSN) <u>1620014450092</u> NOUN: <u>PISTON ASSEMBLY</u> PART NUMBER (P/N) <u>68A412704-1003</u> AIRCRAFT:F-15

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$3000.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.
- 4. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. The offeror must demonstrate that the forging vendor controlling the forging dies and tooling will give the offeror unrestricted access.

	REVISION:	10 :					Γ	K	ENGINEERING DATA	TA LIST	*	* HISTORY *
DATE:	1	DATA TECH:	SCH	0	RGN S	ORGN SYMBOL	II	197	LGMPM PR NR :		APPLICATION: F-16	PAGE 1 OF 1
CAGE: 13002		MANUFACTÜRER NAME: GOODRICH		1			RE 20	REFERENCE 2006601-109	REFERENCE NR: 2006601-109	NOUN: HOUSING	NOUN : HOUSING ASSEMBLY	NSN : 1620011627396
CAGE	E DRAWING NUMBER	NUMBER	<u>~</u>	REV SHE	NR EETS C	NR FURN DIST SHEETS CARDS CODE CODE	URN D	TST )DE	NOON		REQUIREMENTS	
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1757	17576 2006404-203			90	0001 0	0000	S	BO	BUSHING SLEEVE - LANDING GEAR			
1757	17576 2006404-205		\	ю н	0001 0	0000	S	DE	BUSHING SLEEVE - LANDING GEAR	7		
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E	ENGINEERING DATA LIST REMARKS	LIST REMARKS							FURNISHED METHOD CODE LEGEND:  C - CLASSIFIED DOCUMENT.  S - FURNISHED WITH SOLICITATI  M - STABLE BASE DRAWING REQUI  FURNISHED WITH CONTRACT A	IISHED METHOD CODE LEGEND: CLASSIFIED DOCUMENT. FURNISHED WITH SOLICITATION. STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD.	<ul> <li>X - DATA SUPPLIED (NOT IN EDCARS).</li> <li>R - FURNISHED BY PCD UPON REQUEST.</li> <li>P - PARTIAL DOCUMENT FURNISHED.</li> <li>V - VENDOR DRAWING;</li> <li>(NOT PROVIDED).</li> </ul>	G - GOV'T DOCUMENT. O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT AVAILABLE.

REV:	ENGINEERING DATA haQUIREMENTS  (ATTACHMENT "A")					
	NOTE: MILITARY SPECIFICATIONS I/STANDARDS WILL NOT BE FURNISHED IN THE BID SET.					
1. THE FOLLOWING INSTRUCTIONS ARE FURNISHED FOR THE MANUFACTURE OF HOUSING ASSEMBLY - NOSE LANDING GEAR SHOCK STRUT						
	LY - NOSE LANDING GEAR SHOCK					
2. PART NUMBER	3. NATIONAL STOCK NUMBER					
2006601-109 1620-01-162-7396						
4. THE FOLLOWING SPECIFICATIONS/STANDARDS, ETC., WILL BE USED IN LIEU OF THE DATA INDICATED. THE SUPERSEDED DATA WILL NOT BE FURNISHED UNLESS SO INDICATED.						
5. PER DRAWING 2006	5. PER DRAWING 2006601 FLAGNOTE 1 USE MATERIAL SAE AMS-QQ-A-367 IN LIEU OF QQ-A-367.					
6. SHOT PEEN PER SAE AMS-S-13165 IN LIEU OF MIL-S-13165.						
4, IN LIEU OF MIL-I-68 ALLOWED. THE INTE REQUIRED SENSITIVIT PERFORMING THE INS DEVELOPED BY A LEV	7. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E 1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4, IN LIEU OF MIL-I-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN NAS-410.					
- 0.007" DEEP IN THE I OO-ALC/LGHLEN SHA ACCOMPLISHED AS FO NAMED ON THE CONT BY A DASH AND A SEO INTERMITTENT CONT OF THE PRIOR CONTR	HALL BE VIBROPEENED (WITH VIE LOCATION INDICATED. IF THE DR LL PROVIDE S/N LOCATION INSTR DLLOWS: THE SERIALIZATION SH FRACT, FOLLOWED BY A DASH AN QUENTIALLY UNIQUE 3 DIGIT NUM RACTS SHALL START SERIALIZAT ACT. IF A CONTRACT PRODUCES 6 4 DIGIT SERIAL NUMBERS. THE S	AWING DOES NOT INDICATE A CUCTIONS. SERIALIZATION OF ALL BEGIN WITH THE CAGE OF THE 2 DIGIT YEAR OF MANY MBER. A CONTRACTOR WHO IS ION OF ITEM WITH THE NEXT MORE THAN 999 ITEMS, THE SERIAL CONTRACTOR WHO IS A CONTRACTOR WHO IS	A LOCATION, FITEM SHALL BE FITHE CONTRACTOR UFACTURE, FOLLOWED RECEIVES NUMEROUS NUMBER IN SEQUENCE SERIAL NUMBER			
9. PAINT REQUIREMENTS AS FOLLOWS:						
A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I, IN LIEU OF MIL-P-23377.						
B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595, IN LIEU OF MIL-C-83286, WHICH HAS BEEN CANCELLED.						
0. CORROSION PROTECTION PER MIL-C-16173 GRADE 2 OR MIL-C-11796 CLASS 3 IN LIEU OF MM5752.						
11. PER DRAWINGS 2006404-203, 2006404-205, 2006404-211, 2006404-213, AND 2006404-307 USE MATERIAL SAE AMS 4640 IN LIEU OF AMS 4640.						
2. PER DRAWING 2006404-207 USE MATERIAL SAE AMS 5643 IN LIEU OF AMS 5643.						
3. PER DRAWING 2006701, FLAGNOTE 5, USE MATERIAL SAE AMS-QQ-A-367 IN LIEU OF QQ-A-367.						
4. ULTRASONIC INSPECT PER MIL-STD-2154 IN LIEU OF MIL-I-8950.						
	SAE AMS-H-6088 IN LIEU OF MIL-H	-6088.				
CAROL HWER		SYMBOL	DATE			
CAROL HYER LGMPM 7 Nov 02						

REV:	ENGINEERING DATA REQUIREMENT SONTINUATION SHEET				
	(ATTACHMENT "A")				
PART NUMBER	UMBER NATIONAL STOCK NUMBER				
2006601-109	,	1620-01-162-7396			
16. THE FORGING SHALL BE PROCURED FROM THE ORIGINAL FORGING SOURCE, USING THE ORIGINAL CERTIFIED FORGING PROCEDURES AND DIES/TOOLING.					
THE FORGING SOURC AVAILABLE AND THE	TRACT AWARD, THE DETAILED PAI E, TO THE GOVERNMENT THAT TH E FORGING SOURCE HAS AN AGREE R USE IN THE EVENT THEY ARE THI	IE CERTIFIED DIES AND PROCI EMENT WITH THE DETAIL PAR	EDURES ARE		
THE FORGING DRAWI FORGINGS. THE DETA	DUCTION, FORGING LOT QUALIFICA ING AND SAE AMS-F-7190 FOR STEE AILED PART CONTRACTOR SHALL . E AND SHALL SUBMIT CERTIFIED I	L FORGINGS AND SAE AMS-A- ASSURE THAT THIS HAS BEEN	-22771 FOR ALUMINUM ACCOMPLISHED BY		
17 FORGING SOURCE.	, CONTROL OF FORGING DIES AND	THE LOCATION OF THE DIES.			
A. FORGING DRAWING: 2006701-3					
B. DIE NUMBER:	6194-3				
C. CONTROL OF F	ORGING PROCESS: U.S.A.F.				
D. LOCATION OF I	FORGING DIE:				
INTERCONTINENTA 1200 N. GLENBROO GARLAND, TX 7504 POC: LISA PROCTO PHONE: (972) 494-7 FAX: (972) 272-6197	OK 46 OR 7915				
REVIEW BOARD'S (MF	SYSTEM ENGINEERING RETAINS A RB'S) DISPOSITIONS PRIOR TO SHIP FROM THE ENGINEERING DRAWING	MENT OF DISCREPANT ITEM.	ALL DEVIATIONS,		
19. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.					
	T AWARD, THE SUCCESSFUL BIDDE OUTING DOCUMENTS AND PROCES I BEGINS.				
PREPARED BY	ļ	SYMBOL	DATE		
CAROL HYER	CAROL HYER LGMPM 7 Nov 02				

PAGE \_\_\_\_

REV: ENGINEERING DATA PEOLIPEMS. CONTINUATION SUFFE					
REV:	ENGINEERING DATA REQUIREMENT S CONTINUATION SHEET  (ATTACHMENT "A")				
PART NUMBER		NATIONAL STOCK NUMBER			
2006601-109	,	1620-01-162-7396			
21. INSTALL BUSHINGS PER THE FOLLOWING IN LIEU OF MM5743:					
A. THE BUSHING INSTALLATIONS SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FINISH ON THE I.D. OF THE HOUSING INTO WHICH THE BUSHING IS INSTALLED, OR THE FINISH OF THE O.D. OF THE BUSHING. FORCED INSTALLATION OF SUB-ZERO INSTALLATIONS, SUCH AS THE USE OF A PRESS OR HAMMER IS NOT PERMITTED, AND IS NOT ACCEPTABLE. A SMALL NON-METALLIC HAMMER MAY BE USED TO TAP THE BUSHING INTO ALIGNMENT WITH THE HOUSING BORE, OR TO SEAT THE BUSHING.					
B. PRIOR TO BUSHING INSTALLATION. THE PARTS AND HOUSING BORE SHALL BE CLEANED WITH A CLEANING SOLVENT TO REMOVE ALL CONTAMINATION.					
C. LIQUID NITROGEN SHALL BE USED FOR ALL SUB-ZERO INSTALLATIONS UNLESS SOME OTHER SUB-ZERO COOLANT IS SPECIFIED, AND APPROVED BY OO-ALC/LGHLEN ENGINEERING. THE SOAK TIME OF THE BUSHING IN THE LIQUID NITROGEN SHALL BE SUFFICIENT TO ALLOW THE BUSHING TO REACH THE SAME TEMPERATURE AS THE COOLANT.					
COOLANT WITH AN A	SHALL BE INSTALLED INTO THE HO BSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH	E. TRIAL RUNS SHALL BE ACC	COMPLISHED AS		
INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE U ETC.; TO THE MAXIM MONITOR HEAT AND	ONALLY BE NECESSARY TO HEAT TON TO SUB-ZERO COOLING OF TH ANT OR OTHER ORGANIC MATERI SE OF RADIANT HEAT TECHNIQUE UM TEMPERATURE OF 250 F. TEM SHALL BE LOCATED ON AREAS OF CALING, OXIDATION, OR CORROSI	HE BUSHING. DETAIL PARTS I AL APPLIED PRIOR TO HEATING ES, SUCH AS THERMAL BLANK IPERATURE MEASURING DEVI THE PART EXPECTED TO REA	N PROCESS WILL NOT NG, THE PARTS SHALL ETS, INFRARED LAMPS ICES SHALL BE USED TO		
LIGHT COAT OF SEAL	OUT FLANGES SHALL BE INSTALL ANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PE	SHRUNKEN BUSHING AND WI	PE OFF ANY EXCESS		
G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS INSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.					
H. FOR BUSHINGS WITH EXTERNAL GREASE GROOVES THE INSIDE OF THE LUG WILL BE COATED WITH MIL-C-16173 PRIOR TO BUSHING INSTALLATION AND FACE OF LUG WILL BE COATED WITH MIL-PRF-81733 PER PARAGRAPH G, IF BUSHING IS FLANGED.					
22. APPLY A THIN UNIFORM COATING OF PRIMER PER MIL-PRF-85582 TO ALL BUSHING BORES AND ALLOW TO FULLY CURE, PRIOR TO INSTALLATION OF BUSHING. (PRIMER SHALL NOT OBSTRUCT GREASE PASSAGES).					
PREPARED BY		SYMBOL	DATE		
CAROL HYER		•	DATE		
CAROL III ER	İ	LGMPM	7 Nov 02		

PAGE 3

(PL98-525, SECTION 2319)

STOCK NR (NSN)1620-01-162-7396 NOUN: <u>Housing Assembly - Nose Landing Gear Shock</u> Strut PART NUMBER (P/N)2006601-109 AIRCRAFT:F-16

# SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2006601-109 and specification MIL-A-22771. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.
  - (a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(PL98-525, SECTION 2319)

STOCK	NR	(NSI	V) <u>16</u>	<u> 320-01-</u>	62-7	<u> 7396</u>	
	**					-	3.

PART NUMBER (P/N)2006601-109 AIRCRAFT:F-16

Strut

NOUN: Housing Assembly - Nose Landing Gear Shock

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$3,500.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

L	REVISION:	10						E	ENGINEERING DATA LIST	LIST	*	* HISTORY *
DATE	: 12MAR03	DATA TECH:	SCH		RGN (	ORGN SYMBOL:	ZL :	∥ ¤	LGMPM PR NR:		APPLICATION: F-16	PAGE 1 OF 1
CAGE: 13002	SE: MANUFACTURER NAME: 02 GOODRICH	URER NAME:		1			N 2	REFERENCE 2007602-103	2007602-103	NOUN: PISTON, L	NOUN : PISTON, LANDING GEAR	NSN : 1620012524042
CAGE	E DRAWING NUMBER	NUMBER	<u> </u>	REV SH	NR EETS	NR NR FURN DIST SHEETS CARDS CODE CODE	FURNI	JEST CODE	NOUN		REQUIREMENTS	
3966	39661 MM4990		\	0	0000	0000	ß	#	HEAT TREAT SPECIFICATION			
1757	17576 MMS542		\	°	0000	0000	S	U	CADMIUM PLATING SPECIFICATION			3
9874	98747 00-ALC FORM 462			°	9000	0000	s	M	ENGR DATA ROMIS (ATTACH A)			
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1757	17576 2007404-43		\	o m	1000	0000	ß	Ē	BUSHING, SLEEVE - LANDING GEAR			
	/98C0292			<u> </u>				-	Н	ಂತ		
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	/98C0298		-				-			ECO		
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1757	17576 2007652		/	)O E	1000	0000	s	¥	AXLE - NLG			
	/97C0384								LH .	ECO		
1757	17576 2007702		/	Ó	1000	0000	s	Б	PISTON, SHOCK STRUT, NLG FORGING			
STA	STANDARD ENGINEERING TEXT	NG TEXT										
<del></del>												

O - OTHERS, CONTRACTOR MUST ACQUIRE. A - DATA NOT AVALLABLE.

G - GOV'T DOCUMENT.

X - DATA SUPPLIED (NOT IN EDCARS).

R - FURNISHED BY PCD UPON REQUEST.
P - PARTIAL DOCUMENT FURNISHED.
V - VENDOR DRAWING;
(NOT PROVIDED).

C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED; FURNISHED WITH CONTRACT AWARD.

FURNISHED METHOD CODE LEGEND:

ENGINEERING DATA LIST REMARKS

REV:	ENGINE	ERING DATA REQUIREMENTS	
		(ATTACHMENT "A")	
NOTE: MILITARY SPECIFICATION	ONS I/STANDARDS WILL NOT BE FURNISHED IN T ONS ARE FURNISHED FOR THE MANUFACTURE	THE BID SET.	
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2. PART NUMBER		Lo. MATIONAL OTOOK MILLIONS	
2007602-103		3. NATIONAL STOCK NUMBER	
		1620-01-252-4042	
4. THE FOLLOWING SPECIFICATION FURNISHED UNLESS SO INDICATION OF THE PROPERTY	TIONS/STANDARDS, ETC., WILL BE USED IN LIEU TED.	J OF THE DATA INDICATED. THE SUPERSE	DED DATA WILL NOT BE
	602, FLAG NOTE 1, DRAWING 2007 LL SAE AMS 6257 IN LIEU OF MIL-S		VING 2007652, FLAG
6. HEAT TREAT PER S	AE AMS-H-6875 IN LIEU OF MIL-H-	6875 AND MM4995.	,
TREAT, SHALL BE INS	EATED OVER 180 KSI AND ABOVE PECTED FOR ABUSIVE GRINDING/ HALL BE PER MIL-STD-866 IN LIEU	MACHINING BURNS PER MIL-S	
8. IDENTIFICATION A	ND MARKING PER MIL-STD-130 IN	LIEU OF TM1040.	
DIRECT CURRENT (FW ACCEPTANCE/REJECT THAT THE INSPECTION INDICATIONS ALLOW	IC PARTICLE INSPECTION PER AS' (DC), WET CONTINUOUS METHOD ION CRITERIA: NO DEFECTS ALLOW IS CONDUCTED AT THE REQUIRED. THE INSPECTOR PERFORMING IN PROCEDURE DEVELOPED BY A I	, FLUORESCENT TYPE WITH T OWED. THE INTENT OF NO DE ED SENSITIVITY LEVEL AND T G THE INSPECTION SHALL BE O	HE FOLLOWING EFECTS ALLOWED IS THERE SHALL BE NO CERTIFIED TO LEVEL II
10. SHOT PEEN PER SA	AE AMS-S-13165 IN LIEU OF MIL-S-1	13165.	
11. DIMENSIONS AND	TOLERANCING PER ASME Y14.5 IN	N LIEU OF ANSI Y14.5.	
	M4951 CADMIUM PLATING WILL N IATE USE SPECIFICATION MM5542		
0.004" - 0.007" DEEP IN OO-ALC/LGHLEN SHAI ACCOMPLISHED AS FO NAMED ON THE CONT BY A DASH AND A SEO INTERMITTENT CONTE OF THE PRIOR CONTE	HALL BE VIBROPEENED (WITH VI THE LOCATION INDICATED. IF T LL PROVIDE S/N LOCATION INSTR DLLOWS: THE SERIALIZATION SHA RACT, FOLLOWED BY A DASH AN QUENTIALLY UNIQUE 3 DIGIT NUM RACTS SHALL START SERIALIZATI ACT. IF A CONTRACT PRODUCES 4 DIGIT SERIAL NUMBERS. THE S	HE DRAWING DOES NOT INDIGUCTIONS. SERIALIZATION OF ALL BEGIN WITH THE CAGE OF THE 2 DIGIT YEAR OF MANUBER. A CONTRACTOR WHO FOR THE NEXT MORE THAN 999 ITEMS, THE SERIAL S	CATE A LOCATION, ITEM SHALL BE F THE CONTRACTOR UFACTURE, FOLLOWED RECEIVES NUMEROUS NUMBER IN SEQUENCE SERIAL NUMBER
14. CORROSION PROTE	ECTION PER MIL-C-16173, GRADE 1	OR MIL-C-11796, CLASS 1 OR	2 IN LIEU OF MM5752.
15. CHROME PLATE TO	D DRAWING REQUIREMENTS AND	SAE AMS-QQ-C-320 IN LIEU O	F QQ-C-320.
16. SURFACE TEXTUR	E PER ASME B46.1 IN LIEU OF ASA	B46.1.	
17. APPLY BEAD OF SE	EALANT PER MIL-PRF-81733 IN LIE	U OF MIL-S-81733.	
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	24 Apr 03

REV:	ENGINEERING DA	TA REQUIREME CONT	INUATION SHEET
		(ATTACHMENT "A")	
		Talana araak alla araa	
PART NUMBER		NATIONAL STOCK NUMBER	
2007602-103	2	1620-01-252-4042	
10 INCTALL DUCHIN	GS PER THE FOLLOWING IN LIEU C	NE MM57/2	
18. INSTALL BUSINE	OS PER THE POLLOWING IN LIEU C	71	
TO THE FINISH ON THE O.D. OF THE BUS PRESS OR HAMMER IS	INSTALLATIONS SHALL BE ACCOMED IND. OF THE HOUSING INTO WHICHING. FORCED INSTALLATION OF NOT PERMITTED, AND IS NOT ACT BUSHING INTO ALIGNMENT WITH	CH THE BUSHING IS I F SUB-ZERO INSTALLA CEPTABLE. A SMALI	NSTALLED, OR THE FINISH OF ATIONS, SUCH AS THE USE OF A L NON-METALLIC HAMMER MAY
	IING INSTALLATION, THE PARTS A TO REMOVE ALL CONTAMINATION		HALL BE CLEANED WITH A
SUB-ZERO COOLANT	GEN SHALL BE USED FOR ALL SUB- IS SPECIFIED, AND APPROVED BY E LIQUID NITROGEN SHALL BE SUF E AS THE COOLANT.	OO-ALC/LGHLEN ENG	GINEERING. THE SOAK TIME OF
COOLANT WITH AN A	SHALL BE INSTALLED INTO THE H ABSOLUTE MINIMUM OF LOST TIM MIZE INSTALLATION TIME WHICH	E. TRIAL RUNS SHAL	L BE ACCOMPLISHED AS
INSTALLED, IN ADDI HAVE PAINT OR SEA BE HEATED BY THE I ETC.; TO THE MAXIM MONITOR HEAT AND	SIONALLY BE NECESSARY TO HEAT TION TO SUB-ZERO COOLING OF T LANT OR OTHER ORGANIC MATER USE OF RADIANT HEAT TECHNIQUE SUM TEMPERATURE OF 250 F. TEN SCALING, OXIDATION, OR CORROS	HE BUSHING. DETAII IAL APPLIED PRIOR T ES, SUCH AS THERMA MPERATURE MEASUR F THE PART EXPECTE	PARTS IN PROCESS WILL NOT O HEATING, THE PARTS SHALL LE BLANKETS, INFRARED LAMPS ING DEVICES SHALL BE USED TO TO REACH MAXIMUM
LIGHT COAT OF SEA	THOUT FLANGES SHALL BE INSTAL LANT PER MIL-PRF-81733. INSTALI THAVE EXTRUDED AROUND THE P	SHRUNKEN BUSHING	G AND WIPE OFF ANY EXCESS
SEALANT SHALL ALS A MANNER AS TO EN INSTALLED. WIPE O	TH FLANGES SHALL BE INSTALLED SO BE APPLIED TO FACE OF LUG U ISURE COMPLETE COVERAGE OF II FF ANY EXCESS SEALANT AROUNI IER END OF BUSHING ALSO.	NDER FLANGE. SEAL NSIDE FACE OF BUSH	ANT SHALL BE APPLIED IN SUCH ING FLANGE WHEN BUSHING IS
H. FOR BUSHINGS MIL-C-16173 PRIOR TO PARAGRAPH G, IF BU	S WITH EXTERNAL GREASE GROOV O BUSHING INSTALLATION AND FA USHING IS FLANGED.	'ES THE INSIDE OF TH ACE OF LUG WILL BE	IE LUG WILL BE COATED WITH COATED WITH MIL-PRF-81733 PER
PLATING) TO ALL BU	INIFORM COATING OF PRIMER PER ISHING BORES AND ALLOW TO FUI OBSTRUCT GREASE PASSAGES).		
PREPARED BY		SYMBOL	DATE
		i company	ı

**LGMPM** 

24 Apr 03

PAGE 2

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CAROL HYER

ENGINEERING DATA REQUIREM (ATTACHM		REV:
 NATIONAL ST	BER	PART NUMBER
1620-0	)2-103	2007602-103
MS 2300 IN LIEU OF AMS 2300	,	

- CLEANLINESS PER SAE AMS 2300 IN LIEU OF AMS 2300.
- 21. APPLY DRY FILM LUBRICANT PER MIL-L-23398 TYPE I, IN LIEU OF MM1920.
- 22. CADMIUM PLATE TO DRAWING REQUIREMENTS AND SAE AMS-QQ-P-416 IN LIEU OF QQ-P-416.
- 23. PER DRAWING 2007409, USE MATERIAL 4330V MODIFIED STEEL PER SAE AMS 6411 IN LIEU OF AMS 6411.
- 24. PAINT REQUIREMENTS AS FOLLOWS:
- A. APPLY ONE COAT EPOXY WATERBORNE PRIMER PER MIL-PRF-85582, TYPE I, CLASS 2. ALTERNATE ONE COAT OF EPOXY POLYAMIDE PRIMER PER MIL-PRF-23377, TYPE I IN LIEU OF MIL-P-23377.
- B. APPLY TWO TOPCOATS POLYURETHANE PER MIL-PRF-85285, TYPE I, COLOR NUMBER 17925 (WHITE) PER FED-STD-595 IN LIEU OF MIL-C-83286.
- 25. PERFORM FLUORESCENT PENETRANT INSPECTION PER ASTM E1417, TYPE I, METHOD B OR C, LEVEL 3 OR 4, IN LIEU OF MIL-I-6866, WITH THE FOLLOWING ACCEPTANCE/REJECTION CRITERIA: NO DEFECTS ALLOWED. THE INTENT OF NO DEFECTS ALLOWED IS THAT THE INSPECTION IS CONDUCTED AT THE REQUIRED SENSITIVITY LEVEL AND THERE SHALL BE NO INDICATIONS ALLOWED. THE INSPECTOR PERFORMING THE INSPECTION SHALL BE CERTIFIED TO LEVEL II WITH THE INSPECTION PROCEDURE DEVELOPED BY A LEVEL III AS SPECIFIED IN AIA/NAS NAS-410.
- 26. PER DRAWINGS 2007404-83 AND 2007404-97 USE MATERIAL 7075-T73 AL ALLOY BAR PER SAE AMS-QQ-A-225/9 IN LIEU OF QQ-A-225/9, OR SAE AMS-QQ-A-200/11 IN LIEU OF QQ-A-200/11.
- 27. PER DRAWING 2006622, FLAG NOTE 12, USE MATERIAL SAE AMS-S-5000 IN LIEU OF MIL-S-5000 OR AMS 6414, AMS 6257 IN LIEU OF MIL-S-8844.
- 28. THREADS TO BE SAFETY CRITICAL.
- 29. OO-ALC/LGHLEN SYSTEM ENGINEERING RETAINS ALL RIGHTS TO REVIEW AND ACCEPT MATERIAL REVIEW BOARD (MRB'S) DISPOSITIONS PRIOR TO SHIPMENT OF DISCREPANT ITEM. ALL DEVIATIONS, MINOR AND MAJOR, FROM THE ENGINEERING DRAWING PACKAGE SHALL BE SUBMITTED FOR MRB DISPOSITION.
- 30. PRIOR TO CONTRACT AWARD, THE CONTRACTOR SHALL CERTIFY TO THE GOVERNMENT IN WRITING FULL COMPLIANCE WITH MANUALS, SPECIFICATIONS, AND STANDARDS CALLED OUT AND REQUIRED FOR THE MANUFACTURE OF THIS CONTRACTED LANDING GEAR COMPONENT/ASSEMBLY. CONTRACTOR IS RESPONSIBLE TO COMPLETELY SEARCH THESE MANUALS, SPECIFICATIONS, AND STANDARDS AND FULLY UNDERSTAND THE REQUIREMENTS NECESSARY TO MANUFACTURE LANDING GEAR COMPONENTS. ANY QUESTIONS CAN BE FORWARDED TO OO-ALC/LGHLEN.
- 31. AFTER CONTRACT AWARD, THE SUCCESSFUL BIDDER SHALL PROVIDE A COPY OF THE PROCESSING DOCUMENTATION (ROUTING DOCUMENTS AND PROCESS SPECIFICATIONS) TO LIGHLEN FOR FINAL REVIEW BEFORE PRODUCTION BEGINS.

PREPARED BY	SYMBOL	DATE
CAROL HYER	LGMPM	24 Apr 03

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REV:	ENGINEERING DA	TA REQUIREME. CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
2007602-103	,	1620-01-252-4042	
	ORGING WILL BE PROCURED FROM FORGING PROCEDURES AND DIES.		OURCE USING THE
THE FORGING SOURCE AVAILABLE AND THE	RACT AWARD, THE DETAILED PAI E, TO THE GOVERNMENT THAT TH FORGING SOURCE HAS AN AGREE USE IN THE EVENT THEY ARE THI	IE CERTIFIED DIES AND PROC EMENT WITH THE DETAIL PAR	EDURES ARE
THE FORGING DRAWING FORGINGS. THE DETA	UCTION, FORGING LOT QUALIFICA NG AND SAE AMS-F-7190 FOR STEE AILED PART CONTRACTOR SHALL E AND SHALL SUBMIT CERTIFIED I	L FORGINGS AND SAE AMS-A ASSURE THAT THIS HAS BEEN	-22771 FOR ALUMINUM ACCOMPLISHED BY
33. FORGING SOURCE	E, CONTROL AND LOCATION OF DI	IES:	
A. FORGING DRAW	/ING: 2007702-1		
B. DIE NUMBER: 1	0824		
C. CONTROL OF FO	ORGING PROCESS: GOODRICH	ı	
D. LOCATION OF F	ORGING DIES:		
SIFCO IND., INC SIFCO FORGE GROU 970 EAST 64TH STRI CLEVELAND, OH 44 PHONE: 216-432-628 POC: MARILYN IRV CAGE: 78226	EET 4103-1620 37		
PREPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	24 Apr 03

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-252-4042</u> NOUN: <u>Piston Assy - NLG Shock Strut</u> PART NUMBER (P/N)<u>2007602-103</u> AIRCRAFT:F-16

#### SECTION C

# QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first article exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>2007602-103</u> and specification <u>MIL-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-252-4042</u> NOUN: Piston Assy - NLG Shock Strut PART NUMBER (P/N)<u>2007602-103</u> AIRCRAFT:F-16

### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a prequalification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

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DATE:	26FEB01	V TECH :	SJH	<u>p</u>	KGN S	ORGN SYMBOL :	)  ;	LGMPM	PR NR :	APPLICATION:	F-16	PAGE 1 OF 1
CAGE: 13002	E: MANUFACTURER NAME:	RER NAME: H		1			KEF 200	REFERENCE NR: 2007601-103	H	NOUN: HOUSING ASSEMBLY		NSN: 1620012524041
CAGE	DRAWING NUMBER	UMBER	<u> </u>	REV SHE	R P	ARDS CO	NR NR FURN DIST SHEETS CARDS CODE CODE	ST NOUN	5	RI	REQUIREMENTS	
1757	17576 MMS542		m _	BC 00	0 0000	0000	S S	CADMIUM/TITANIUM ALLOY PLATING	1 ALLOY PLATING			
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1757	17576 2007404-61			00 El	0000	0000	S	BUSHING SLEEVE				
1757	17576 2007404-63		-	00 <b>K</b>	0 0000	0000	S	BUSHING SLEEVE				
1757	17576 2007404-69		-	00 <b>V</b>	0 0000	0000	S	BUSHING SLEEVE				
1757	17576 2007404-71		-	A 00	0000	0000	S	BUSHING SLEEVE				
1757	17576 2007404-95		-	00 ¥	0 0000	0000	s	BUSHING SLEEVE				
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								E	STABLE BASE DRAWING REQUIRED; FIRNISHED WITH CONTRACT AWARD		WING; DED).	A - DATA NOT AVAILABLE.

REV:	ENGINE	ERING DAT (EQUIREMENTS	
NOTE: MILITARY SPECIFICATION	ONS I/STANDARDS WILL NOT BE FURNISHED IN TI TIONS ARE FURNISHED FOR THE MANUFACTURE (	HE BID SET.	
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	ATIONS/STANDARDS, ETC., WILL BE USED IN LIEU		DED DATA WILL NOT BE
FURNISHED UNLESS SO INDICA		OF THE DATA INDICATED. THE SOFENSEE	DED DATA WILL NOT BE
MIL-I-6868. USE FULL WITH THE FOLLOWIN DEFECTS ALLOWED THERE SHALL BE NO	QUIREMENTS, PERFORM MAGNETIC WAVE DIRECT CURRENT (FWDC), IG ACCEPTANCE/REJECTION CRITE IS THAT THE INSPECTION IS COND INDICATIONS ALLOWED. THE INS II WITH THE INSPECTION PROCED	WET CONTINUOUS METHOD, CRIA: NO DEFECTS ALLOWED UCTED AT THE REQUIRED SENTE PECTOR PERFORMING THE INSTANCE.	FLUORESCENT TYPE P. THE INTENT OF <u>NO</u> SITIVITY LEVEL AND SPECTION SHALL BE
I, METHOD B OR C, LI CRITERIA: <u>NO DEFEC</u> CONDUCTED AT THE INSPECTOR PERFORM	QUIREMENTS, PERFORM FLUORESO EVEL 3 OR 4 IN LIEU OF MIL-I-6866 CTS ALLOWED. THE INTENT OF NO REQUIRED SENSITIVITY LEVEL AN IING THE INSPECTION SHALL BE CI EPED BY A LEVEL III AS SPECIFIED T	WITH THE FOLLOWING ACCER O DEFECTS ALLOWED IS THA ID THERE SHALL BE NO INDIC ERTIFIED TO LEVEL II WITH TI	TANCE/REJECTION T THE INSPECTION IS ATIONS ALLOWED. THE
7. PER FLAG NOTE 1 PER SAE AMS 2300 IN	DRAWING 2007601, MATERIAL PER LIEU OF AMS 2300.	SAE AMS 6257 IN LIEU OF MIL	-S-8844. CLEANLINESS
8. PER FLAG NOTE 2 AMS-H-6875 IN LIEU C	DRAWING 2007601 AND DRAWING I DF MIL-H-6875.	REQUIREMENTS, PROCESS ANI	O HEAT TREAT PER SAE
9. PER FLAG NOTE 3 EXCEPTION OF FLAG	DRAWING 2007601, SHOT PEEN PER NOTE 15.	SAE AMS-S-13165 IN LIEU OF I	MIL-S-13165 WITH THE
VIBROPEENED (WITH LOCATION INDICATE S/N LOCATION INSTR SERIALIZATION SHAI FOLLOWED BY A DAS SEQUENTIALLY UNIQ CONTRACTS SHALL S	DRAWING 2007601 AND DRAWING VIBRATING PNEUMATIC PENCIL) ID. IF THE DRAWING DOES NOT IN: UCTIONS. SERIALIZATION OF ITEM LL BEGIN WITH THE CAGE (FSCM) OF AND THE 2 DIGIT YEAR OF MAN QUE 3 DIGIT NUMBER. A CONTRACT TART SERIALIZATION OF ITEM WITH THACT PRODUCES MORE THAN 99 01".	N 0.09" LETTERS 0.004" - 0.007' DICATE A LOCATION, OO-ALC M SHALL BE ACCOMPLISHED A DF THE CONTRACTOR NAMED UFACTURE, FOLLOWED BY A TOR WHO RECEIVES NUMERO ITH THE NEXT NUMBER IN SEQ	DEEP IN THE LILE SHALL PROVIDE LS FOLLOWS: THE ON THE CONTRACT, DASH AND A US INTERMITTENT UENCE OF THE PRIOR
11. PER DRAWING RE	EQUIREMENTS, I.D. AND MARK PER	MIL-STD-130 IN LIEU OF TM10	)40.
PREPARED BY	· · · · · · · · · · · · · · · · · · ·	SYMBOL	DATE
JOAN HYATT		LGMPM	01 MAY 01
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REV:	ENGINEERING DA	ATA REQUIREN S CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
2007601-103	1	1620-01-252-4041	
12. PER FLAG NOTE 9	DRAWING 2007601, PAINT AS FOLI	LOWS WITH THE EXCEPTION	OF FLAG NOTE 10:
	AT EPOXY WATERBORNE PRIMER YAMIDE PRIMER PER MIL-PRF-2337		LASS 2. ALTERNATE ONE
B. APPLY TWO TO FED-STD-595 IN LIEU (	PCOATS POLYURETHANE PER MIL OF MIL-C-83286, WHICH HAS BEEN	-PRF-85285, TYPE I, COLOR NU CANCELLED.	JMBER 17925 (WHITE) PER
13. PER DRAWING REC IN LIEU OF MM5752.	QUIREMENTS, CORROSION PROTEC	CTION PER MIL-C-16173 GR 1 O	R MIL-C-11796 CL 1 OR 2
14. PER FLAG NOTE 1 THICK REF.) IN LIEU (	6 DRAWING 2007601, CADMIUM PL DF MM4951.	ATE PER MIL-STD-870 AND MI	M5542 (.00020003
15. PER FLAG NOTE 2 IN LIEU OF MM4951.	1 DRAWING 2007601, CADMIUM PL	ATE PER MIL-STD-870 AND MI	M5542 (.0005 THICK REF.)
16. PER FLAG NOTE 9	DRAWING 2007404-95, MATERIAL I	PER ASTM B196 AND ASTM B1	.94 IN LIEU OF QQ-C-530.
2007404-69, FLAG NOT	10 DRAWING 2007404-95, FLAG NOT TE 10 DRAWING 2007404-63 AND FLA 6 TYPE II CL 3 IN LIEU OF QQ-P-416	AG NOTE 10 DRAWING 2007404	
18. PER FLAG NOTE 9 IN LIEU OF AMS 4880.	DRAWING 2007404-71, MATERIAL I	PER SAE AMS 4640 IN LIEU OF	AMS 4640, SAE AMS 4880
19. PER FLAG NOTE 9 4640 AND SAE AMS 488	DRAWING 2007404-69 AND FLAG N 30 IN LIEU OF AMS 4640 AND AMS 4	OTE 9 DRAWING 2007404-61, N 4880.	MATERIAL PER SAE AMS
20. PER FLAG NOTE 9	DRAWING 2007404-63, MATERIAL I	PER SAE AMS 4640 IN LIEU OF	AMS 4640.
21. PER FLAG NOTE 5 PER SAE AMS 2300 IN I	DRAWING 2007701, MATERIAL PER LIEU OF AMS 2300.	R SAE AMS 6257 IN LIEU OF M	IL-S-8844; CLEANLINESS
22. PER FLAG NOTE 6 MIL-H-6875.	DRAWING 2007701, NORMALIZE A	ND TEMPER PER SAE AMS-H-6	875 IN LIEU OF
23. PER DRAWING REG MIL-G-7190 GRADE A.	QUIREMENTS, FORGE AND INSPEC	T PER SAE AMS-F-7190 GRADE	E A IN LIEU OF
24. APPLY A THIN UN TO ALL BUSHING BOR NOT OBSTRUCT GREA	IFORM COATING OF PRIMER PER M ES AND ALLOW TO FULLY CURE P SE PASSAGES).	MIL-PRF-23377 OR MIL-PRF-855 PRIOR TO INSTALLATION OF B	82 (AFTER ANODIZING) SUSHING (PRIMER SHALL
PREPARED BY		SYMBOL	DATE
JOAN HYATT		LGMPM	01 MAY 01

PAGE 2 OF

REV:	ENGINEERING DA	TA REQUIREL (S CONTINUATION S (ATTACHMENT "A")	SHEET		
PART NUMBER		NATIONAL STOCK NUMBER			
2007601-103	,	1620-01-252-4041			
25. INSTALL BUSHING	GS PER THE FOLLOWING IN LIEU O	F MM5743:			
TO THE FINISH ON TH THE O.D. OF THE BUS PRESS OR HAMMER IS	INSTALLATIONS SHALL BE ACCOMINE I.D. OF THE HOUSING INTO WHICE SHING. FORCED INSTALLATION OF SOME PERMITTED, AND IS NOT ACCURACY BUSHING INTO ALIGNMENT WITH	CH THE BUSHING IS INSTALLE SUB-ZERO INSTALLATIONS, S CEPTABLE. A SMALL NON-ME	ED, OR THE FINISH OF SUCH AS THE USE OF A ETALLIC HAMMER MAY		
	IING INSTALLATION, THE PARTS A TO REMOVE ALL CONTAMINATION		CLEANED WITH A		
SUB-ZERO COOLANT	GEN SHALL BE USED FOR ALL SUB- IS SPECIFIED AND APPROVED BY O UID NITROGEN SHALL BE SUFFICIE HE COOLANT.	O-ALC/LILE ENGINEERING. T	THE SOAK TIME OF THE		
COOLANT WITH AN A	SHALL BE INSTALLED INTO THE HO ABSOLUTE MINIMUM OF LOST TIME MIZE INSTALLATION TIME WHICH S	E. TRIAL RUNS SHALL BE ACC	COMPLISHED AS		
INSTALLED, IN ADDIT HAVE PAINT OR SEAL BE HEATED BY THE U ETC.; TO THE MAXIM BE USED TO MONITOI	IONALLY BE NECESSARY TO HEAT FION TO SUB-ZERO COOLING OF THE LANT OR OTHER ORGANIC MATERILISE OF RADIANT HEAT TECHNIQUE TUM TEMPERATURE OF 250 F. TEMPERATURE. NO SCALING, OXIDATION OF TURE.	HE BUSHING. DETAIL PARTS IN AL APPLIED PRIOR TO HEATIN ES, SUCH AS THERMAL BLANK PERATURE MEASURING DEVIC ON AREAS OF THE PART EXPEC	N PROCESS WILL NOT IG, THE PARTS SHALL ETS, INFRARED LAMPS CES SHALL CTED TO REACH		
LIGHT COAT OF SEAL	THOUT FLANGES SHALL BE INSTALI ANT PER MIL-PRF-81733. INSTALL HAVE EXTRUDED AROUND THE PE	SHRUNKEN BUSHING AND WI	PE OFF ANY EXCESS		
G. BUSHINGS WITH FLANGES SHALL BE INSTALLED IN A SIMILAR MANNER AS PARAGRAPH (F) EXCEPT SEALANT SHALL ALSO BE APPLIED TO FACE OF LUG UNDER FLANGE. SEALANT SHALL BE APPLIED IN SUCH A MANNER AS TO ENSURE COMPLETE COVERAGE OF INSIDE FACE OF BUSHING FLANGE WHEN BUSHING IS NSTALLED. WIPE OFF ANY EXCESS SEALANT AROUND PERIPHERY OF BUSHING FLANGE. WIPE OFF ANY EXCESS SEALANT FROM OTHER END OF BUSHING ALSO.					
	WITH EXTERNAL GREASE GROOVI D BUSHING INSTALLATION AND FAC SHING IS FLANGED.				
PREPARED BY		SYMBOL	DATE		
JOAN HYATT		LGMPM	01 MAY 01		

PAGE 3

REV:	ENGINEERING DA	ATA REQUIRE: .S CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
2007601-103		1620-01-252-4041	
A. PRIOR TO CONT THE FORGING SOURC AVAILABLE AND THE FORGINGS FOR THEIR  B. PRIOR TO PROD THE FORGING DRAWI FORGINGS. THE DETA THE FORGING SOURCE GOVERNMENT.  27. FORGING SOURCE A. FORGING DRAW DIE#: 7739	ALL BE PROCURED FROM THE ORIGINATION OF DISTRICT AWARD, THE DETAILED PARE, TO THE GOVERNMENT THAT THE FORGING SOURCE HAS AN AGREE USE IN THE EVENT THEY ARE THE OUCTION, FORGING LOT QUALIFICE OF AND SAE AMS-F-7190 FOR STEE ALLED PART CONTRACTOR SHALL E AND SHALL SUBMIT CERTIFIED OF CONTROL AND LOCATION OF DISTRICT CONTROL OF	ART BIDDER SHALL PROVIDE OF THE CERTIFIED DIES AND PROCEMENT WITH THE DETAIL PAINTE SUCCESSFUL BIDDER.  ATION SHALL BE ACCOMPLISEL FORGINGS AND SAE AMS-AASSURE THAT THIS HAS BEEN DOCUMENTATION OF ACCOMPLISES:	CERTIFICATION FROM CEDURES ARE RTS BIDDER TO PROVIDE HED AS SPECIFIED ON 1-22771 FOR ALUMINUM N ACCOMPLISHED BY
C. LOCATION OF F KROPP FORGE COM 5301 W. ROOSEVEL CICERO, IL 60650-1 (708) 652-6691 CAGE: 0BFN1  28. AFTER CONTRACT DOCUMENTATION (RO BEFORE PRODUCTION	IPANY T ROAD 273 T AWARD, THE SUCCESSFUL BIDD DUTING DOCUMENTS AND PROCES	ER SHALL PROVIDE A COPY O SS SPECIFICATIONS) TO LILE F	F THE PROCESSING FOR FINAL REVIEW
BOARD (MRB'S) DISPO MAJOR, FROM THE EN 30. PRIOR TO CONTRAFULL COMPLIANCE W THE MANUFACTURE (RESPONSIBLE TO COMUNDERSTAND THE RE	TEM ENGINEERING RETAINS ALL INSTITIONS PRIOR TO SHIPMENT OF INGINEERING DRAWING PACKAGES SACT AWARD, THE CONTRACTOR SHIPMENT OF THIS CONTRACTED LANDING GOTHER SEARCH THESE MANUAL OF THE SEARCH THESE MANUAL OF THE SEARCH THE SEARCH TO MAIN OR WARDED TO OO-ALC/LILE.	DISCREPANT ITEM. ALL DEVI SHALL BE SUBMITTED FOR MI HALL CERTIFY TO THE GOVE AND STANDARDS CALLED OU' SEAR COMPONENT/ASSEMBLY LS, SPECIFICATIONS AND STA	ATIONS, MINOR AND RB DISPOSITION.  RNMENT IN WRITING TO AND REQUIRED FOR TO CONTRACTOR IS AND FULLY
PREPARED BY		SYMBOL	DATE
JOAN HYATT		LGMPM	1 May 01
OO-ALC FORM 462, OCT 96	G (EF-V1) (PerFORM PRO)		PAGE 4 OF 4

(PL98-525, SECTION 2319)

STOCK NR (NSN)« 1620-01-252-4041»
NOUN: « HOUSING ASSEMBLY-NLG SHOCK STRUT»

PART NUMBER (P/N)« 2007601-103» AIRCRAFT:« F-16»

#### SECTION C

QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the pre-contract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N <u>«2007601-103»</u> and specification <u>SAE AMS-F-7190</u>. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the precontract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

(PL98-525, SECTION 2319)

STOCK NR (NSN)« 1620-01-252-4041»
NOUN: « HOUSING ASSEMBLY-NLG SHOCK STRUT»

PART NUMBER (P/N)<u>« 2007601-103»</u> AIRCRAFT:« F-16»

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$\subseteq 5000.00\structure.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LILE) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a pre-qualification article. There is no guarantee of qualification by similarity. LILE reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.

	REVISION:	1: 05						EN	ENGINEERING	DATA LIST	ST	*	* HICTORY *
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4	~	DAIA IECH:	SCH		ORGN SYMBOL	SYMB	••	2		PR NR :		APPLICATION: F-16	PAGE 1 OF 1
CAGE: 13002		MANUFACTURER NAME: GOODRICH					<u>≅ ₹</u>	REFERENC 2007107-1	REFERENCE NR: 2007107-1		NOUN: OUTER C	NOUN: OUTER CYLINDER ASSY	NSN: 1620012524035
CAGE	DRAWING NUMBER	NUMBER		REV SI	NR NR FURN DIST SHEETS CARDS CODE CODE	NR 'ARDS	FURNI	IST	NOUN			REQUIREMENTS	
39661	39661 MM4990		/		0000	0000	တ	Ħ	HEAT TREAT SPECIFICATION	NOI			
17576	17576 MM5542		`	Ĺ	0000	0000	S	18	CADMIUM PLATING SPECIFICATION	FICATION			,
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17576	17576 2007107		\	Ω	1000	0000	S	E	CYLINDER, OUTER - SHOCK STRT MLG	CK STRT MLG			
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	ENGINEEMING DATA LIST KEMAKKA	LIST KEMAKKS							FURNISHED C - CLASS C - CLASS S - FURNI M - STABL	FURNISHED METHOD CODE LEGEND: C - CLASSIFIED DOCUMENT. S - FURNISHED WITH SOLICITATION. M - STABLE BASE DRAWING REQUIRED; FIRNISHED WITH COMPACT BANDD.	ON. RED;	X - DATA SUPPLIED (NOT IN EDCARS). R - FURNISHED BY PCD UPON REQUEST. P - PARTIAL DOCUMENT FURNISHED. V - VENDOR DRAWING; MOST PROFESSIONAL	 
													AVA TT.ART.F.

nev:	ENGIN	IEERING DATAEQUIREMENTS	S
NOTE: MILITARY SPECIFICATIO	ONS I/STANDARDS WILL NOT BE FURNISHED IN	I THE BID SET.	
	IONS ARE FURNISHED FOR THE MANUFACTUR ER SHOCK STRUT, MLG	E OF	
1	ER SHOCK STRUT, MILG		
2. PART NUMBER		3. NATIONAL STOCK NUMBER	
2007107-1		1620-01-252-4035	
4. THE FOLLOWING SPECIFICA FURNISHED UNLESS SO INDICA	TIONS/STANDARDS, ETC., WILL BE USED IN LII TED.	EU OF THE DATA INDICATED. THE SUPERS	EDED DATA WILL NOT BE
5. MATERIAL: 300M S	TEEL PER SAE AMS 6414, SAE AM	1S 6257 IN LIEU OF MIL-S-8844.	
6. HEAT TREAT PER S.	AE AMS-H-6875 IN LIEU OF MIL-H	I-6875.	
7. ON PARTS HEAT TR WILL BE INSPECTED F	EATED 180 KSI AND ABOVE, ANY OR BURNS PER MIL-STD-867. GRI	Y SURFACES GROUND/MACHIN INDING SHALL BE PER MIL-STI	NED AFTER HEAT TREAT D-866 IN LIEU OF MM5759
DIRECT CURRENT (FW ACCEPTANCE/REJECTI THAT THE INSPECTION INDICATIONS ALLOWERS	IC PARTICLE INSPECTION PER AST (DC), WET CONTINUOUS METHOI ION CRITERIA: NO DEFECTS ALI IN IS CONDUCTED AT THE REQUIR ED. THE INSPECTOR PERFORMIN IN PROCEDURE DEVELOPED BY A	D, FLUORESCENT TYPE WITH T LOWED. THE INTENT OF NO D RED SENSITIVITY LEVEL AND T G THE INSPECTION SHALL BE	THE FOLLOWING EFECTS ALLOWED IS THERE SHALL BE NO CERTIFIED TO LEVEL II
9. SHOT PEEN PER SAE	E AMS-S-13165 IN LIEU OF MIL-S-1	3165.	
10. CADMIUM PLATE S DATA. AS AN ALTERN	SPECIFICATION MM4951 WILL NO IATE USE SPECIFICATION MM554	OT BE FURNISHED AS IT IS LIM 2. (PROVIDED)	ITED (PROPRIETARY)
11. DIMENSIONING AN	ID TOLERANCING PER ASME Y14	4.5 IN LIEU OF ANSI Y14.5.	
0.004" - 0.007" DEEP IN OO-ALC/LGHLEN SHAL ACCOMPLISHED AS FO NAMED ON THE CONTIBY A DASH AND A SEQ INTERMITTENT CONTROF THE PRIOR CONTRA	HALL BE VIBROPEENED (WITH V THE LOCATION INDICATED. IF T LL PROVIDE S/N LOCATION INSTE LLOWS: THE SERIALIZATION SH RACT, FOLLOWED BY A DASH AN UENTIALLY UNIQUE 3 DIGIT NUI RACTS SHALL START SERIALIZAT ACT. IF A CONTRACT PRODUCES 4 DIGIT SERIAL NUMBERS. THE	THE DRAWING DOES NOT INDICATIONS. SERIALIZATION OF ITEM WITH THE CAGE OF THE 2 DIGIT YEAR OF MAN MBER. A CONTRACTOR WHO ITEM OF ITEM WITH THE NEXT HORE THAN 999 ITEMS, THE SERIES.	CATE A LOCATION, FITEM SHALL BE OF THE CONTRACTOR UFACTURE, FOLLOWED RECEIVES NUMEROUS NUMBER IN SEQUENCE SERIAL NUMBER
13. CORROSION PROTECTION PER MIL-C-16173 GRADE 1 OR MIL-C-11796 CLASS 1 OR 2 IN LIEU OF MM5752.			
14. IDENTIFICATION AND MARKING PER MIL-STD-130 IN LIEU OF TM1040.			
15. SURFACE TEXTURE PER ASME B46.1 IN LIEU OF ASA B46.1.			
16. CHROME PLATE TO	DRAWING REQUIREMENTS AND	SAE AMS-QQ-C-320 IN LIEU O	F QQ-C-320.
PREPARED BY			
CAROL HYER		SYMBOL	DATE
		LGMPM	25 Apr 03
OO-ALC FORM 462, OC	T 96 (EF-V1)(PerFORM PRO)	PREVIOUS EDITIONS ARE OBSOLETE	PAGE OF 3

REV:	FNONESPINO		
	ENGINEERING DA	ATA REQUIREML CONTINUATION (ATTACHMENT "A")	SHEET
PART NUMBER		NATIONAL STOCK NUMBER	
2007107-1	,	1620-01-252-4035	
17. PAINT REQUIREM	ENTS AS FOLLOWS:		
A. APPLY ONE CO. COAT OF EPOXY POLY	AT EPOXY WATERBORNE PRIMER YAMIDE PRIMER PER MIL-PRF-2337	PER MIL-PRF-85582, TYPE I, C 77, TYPE I IN LIEU OF MIL-P-2	LASS 2. ALTERNATE ONE 3377.
B. APPLY TWO TO FED-STD-595 IN LIEU (	PCOATS POLYURETHANE PER MIL DF MIL-C-83286.	-PRF-85285, TYPE I, COLOR NI	JMBER 17925 (WHITE) PER
18. CLEANLINESS PER	R SAE AMS 2300 IN LIEU OF AMS 23	00.	
REVIEW BOARD (MRB	SYSTEM ENGINEERING RETAINS A 'S) DISPOSITIONS PRIOR TO SHIPM HE ENGINEERING DRAWING PACK	ENT OF DISCREPANT ITEM. A	LL DEVIATIONS, MINOR
FULL COMPLIANCE W THE MANUFACTURE ( RESPONSIBLE TO COM UNDERSTAND THE RE	ACT AWARD, THE CONTRACTOR SITH MANUALS, SPECIFICATIONS, DESCRIPTIONS OF THIS CONTRACTED LANDING GOVERNMENTS NECESSARY TO MAIN ORWARDED TO OO-ALC/LGHLEN.	AND STANDARDS CALLED OU EAR COMPONENT/ASSEMBLY LS, SPECIFICATIONS, AND ST	T AND REQUIRED FOR CONTRACTOR IS ANDARDS AND FULLY
21. AFTER CONTRACT DOCUMENTATION (I BEFORE PRODUCTION	AWARD, THE SUCCESSFUL BIDDE ROUTING DOCUMENTS AND PROCI BEGINS.	ER SHALL PROVIDE A COPY OF ESS SPECIFICATIONS) TO LGI	THE PROCESSING ILENFOR FINAL REVIEW
22. THE REQUIRED FO ORIGINAL CERTIFIED	PRGING WILL BE PROCURED FROM FORGING PROCEDURES AND DIES	THE QUALIFIED FORGING SO TOOLING.	OURCE USING THE
THE FORGING SOURCH AVAILABLE AND THE	RACT AWARD, THE DETAILED PAI E, TO THE GOVERNMENT THAT TH FORGING SOURCE HAS AN AGREE USE IN THE EVENT THEY ARE THI	E CERTIFIED DIES AND PROC MENT WITH THE DETAIL PAR	EDURES ARE
THE FORGING DRAWIN FORGINGS. THE DETA	UCTION, FORGING LOT QUALIFICA NG AND SAE AMS-F-7190 FOR STEE ILED PART CONTRACTOR SHALL A E AND SHALL SUBMIT ĆERTIFIED I	L FORGINGS AND SAE AMS-A ASSURE THAT THIS HAS BEEN	22771 FOR ALUMINUM ACCOMPLISHED BY
	•		
REPARED BY		SYMBOL	DATE
CAROL HYER		LGMPM	25 Apr 03
0-ALC FORM 462, OCT 96	(EF-V1) (PerFORM PRO)		PAGE OF 3

REV:	ENGINEERING DATA REQUIREMEN. J CONTINUATI	ON SHEET
PART NUMBER	NATIONAL STOCK NUMBER	
2007107-1	1620-01-252-4035	
23. FORGING SOURCE, CONTROL AN	D LOCATION OF DIES:	
A. FORGING DRAWING: 2007207-1		
B. CONTROL OF FORGING PROCES	SS: USAF	
C. LOCATION OF FORGING DIES:		
SIFCO IND., INC 970 E. 64th STR. CLEVELAND, OH 44103-1620 PHONE: 216-881-8600 POC: MARILYN IRVINE DIE # 10822	KROPP FORGE 5301 W. ROOSEVELT ROAD CICERO, IL 60804 PHONE: 708-652-6691 POC: CHUCK MEYER DIE # 8105	
W. PAT CROW, INC 200 LUXTON STR P.O. BOX 1720 FT. WORTH, TX 76101-1720 PHONE: 817-536-2861 X280 POC: LAURA RIVERA DIE # 4912		
PREPARED BY  CAROL HYER	SYMBOL LGMPM	DATE 25 Apr 03
OO-ALC FORM 462, OCT 96 (EF-V1) (PerFORM		PAGE 3 OF 3

## 7SOURCE QUALIFICATION STATEMENT

(PL 98-525, Section 2319)

#### SECTION A. ITEM IDENTIFICATION

- 1. STOCK NUMBER (NSN):1620-01-252-4035
- 2. PART NUMBER (P/N):2007107-1
- 3. NOUN: Cylinder, Outer Shock Strut, MLG
- 4. APPLICATION: F-16

### SECTION B.

JUSTIFICATION FOR ESTABLISHING A QUALIFICATION REQUIREMENT AND REASON WHY QUALIFICATION REQUIREMENT MUST BE DEMONSTRATED PRIOR TO ANY CONTRACT AWARD

- 1. The manufacture, tolerances, material availability and interpretation of engineering data along with the special skills associated with forging, machining and processing of high strength steel forgings can result in product structural or durability degradations if not properly applied.
- 2. The bidder's ability to interpret the engineering drawings, specifications and the execution of the qualification requirements specified herein are necessary to verify the structural integrity as well as form, fit, and function of the item being procured.
- 3. Failure to procure these items from a fully qualified source can degrade the mission capability of the respective aircraft and/or cause the loss of aircraft and crew.
- 4. Completion of the specified pre-contract award qualification requirements will assure the government that the offeror is capable of producing the item in compliance with the applicable technical specification/data and within the schedule and economic constraints of the government's contracts. There are sufficient technical and schedule risks, which can only be minimized by a completion of the requirements prior to contract award.

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-252-4035</u> NOUN: <u>Cylinder, Outer Shock Strut, MLG</u> PART NUMBER (P/N)2007107-1 AIRCRAFT:F-16

#### SECTION C

## QUALIFICATION REQUIREMENTS THAT MUST BE SATISFIED TO BECOME A QUALIFIED SOURCE:

- 1. Because of the need for uninterrupted item support to military aircraft systems while keeping with the requirements of PL 98-525, the current acquisition need not and generally will not be delayed to provide an offeror an opportunity to qualify. Normal acquisition practices at OO-ALC should preclude the denial of opportunity to any interested offeror.
- 2. The offeror must provide a pre-contract award qualification article, which meets the requirements of the engineering drawings, material specifications, and process specifications. However, successful completion of the qualification testing does not guarantee any contract award. If the offeror is deemed qualified and awarded the contract, a post-contract award first ariticle exhibit may be required to verify production capability.
- 3. The qualification article will be subjected to form, fit, and function verification as well as required testing to assure compliance with data list and other applicable procurement criteria. The qualification article shall demonstrate full compatibility and comparability with existing parts.
- 4. The required materials will be procured from a qualified source and shall meet the requirements of their respective specifications. The offeror will assure that the supplier has accomplished this and shall submit certified documentation of accomplishment of the above requirements to the purchaser along with the precontract award qualification article.
- 5. The required forgings shall be procured from the qualified forging source using the original certified forging procedures and dies. Forging material and lot qualifications shall be accomplished as required in the specified forging drawing, P/N 2007107-1 and specification MIL-F-7190. The offeror shall assure that this is or has been accomplished by the forging source and will submit certified documentation of accomplishment of the above requirements to the government along with the pre-contract award qualification article.
- 6. The qualification article once submitted will become subject to such testing as deemed necessary by the U.S. Government to prove that the article meets all dimensional, processing and functional requirements. Such testing may result in the destruction of the article. Following completion of necessary testing and evaluation, the article no matter what its condition shall be returned to the contractor or disposed of at his discretion and direction whether it was found acceptable or not.
- 7. Form verification: The U.S. Government's Quality Verification Center (QVC) will be used to insure compliance with the dimensional requirements of the article. Material and processing compliance will also be verified as required.
- 8. Fit/function verification: Existing components and government test stands and fixtures will be utilized to verify physical interface and functional performance of articles.
- 9. Testing for material and process compliance.

(a) Material analysis

(e) Finish

(b) Heat treat

(f) Grain flow

(c) Grinding

(g) Other

(d) Plating

(PL98-525, SECTION 2319)

STOCK NR (NSN)<u>1620-01-252-4035</u> NOUN: Cylinder, Outer Shock Strut, MLG PART NUMBER (P/N)2007107-1 AIRCRAFT:F-16

#### 10. Remarks:

- a. Organic verification capabilities exist at OO-ALC.
- b. Testing requirements outside organic capabilities will be contracted out.
- 11. The estimated cost of government testing and evaluation is \$2000.00.
- 12. Maximum time for testing of the qualification article will not exceed 30 days from receipt at testing agency.

#### SECTION D

- 1. An offerer who has had previous experience in the manufacture and qualification of items, which can be correlated with this product, may apply to the design control authority at OO-ALC for a waiver of the above stated qualification requirements.
- a. The qualification waiver criteria utilized by the design control authority to perform a qualification analysis are available upon request. The qualification waiver criteria may be used as a guide in preparing the offerer's written input to the design control authority.
- b. The burden of proof for written inputs is on the offerer. The design control authority will not pursue authenticity verification of claims made by the offerer of product manufacturing experience with other Government or non-Government agencies. Unsubstantiated claims will not be considered in the waiver analysis process.
- c. This waiver will be granted if and only if the design control authority (LGHLEN) can establish the qualifications of the offerer through the evaluation of written inputs from the offerer or from previous knowledge of the offerer's capabilities or from previous experience with the offerer on similar item acquisitions. If there is any doubt about the offerer's capability, the offerer will be required to submit a prequalification article. There is no guarantee of qualification by similarity. LGHLEN reserves the right to require a pre-qualification article of all offerers.
- 2. The current acquisition need not and will not be delayed in order to provide an offerer with an opportunity to meet the requirements for qualification waiver.
- 3. Maximum time for approval of qualification by similarity will not exceed 15 days.